

# Idaho Student Information Management System (ISIMS)—Lessons for Future Technology Projects

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Evaluation Report  
August 2006

Office of Performance Evaluations  
Idaho Legislature



Report 06-02

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Donna Boe

Rakesh Mohan, Director  
Office of Performance Evaluations

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# Office of Performance Evaluations Idaho Legislature

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August 22, 2006

Members  
Joint Legislative Oversight Committee  
Idaho Legislature

Last March you directed us to identify what lessons could be learned from the Idaho Student Information Management (ISIMS) project, a partnership between the State of Idaho and the JA and Kathryn Albertson Foundation. This partnership was terminated by the foundation in December 2004.

Technology projects should clearly define the roles and responsibilities of all stakeholders and consider end users' views, needs, and resources at each stage. In addition, technology projects should maintain a realistic scope, supported by realistic expectations of technology and an updated project plan. The ISIMS project did not adequately address these key issues. To ensure a greater degree of confidence and success, we provide a checklist of best practices that should be applied to future technology projects.

We appreciate the cooperation and assistance we received from the Office of the Governor, the Office of the Board of Education, and the Department of Education. The Superintendent of Public Instruction's written response to our findings is included in the report.

Sincerely,

A handwritten signature in blue ink that reads "Rakesh Mohan".

Rakesh Mohan



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## *Executive Summary*

# **ISIMS—Lessons for Future Technology Projects**

*The Idaho Student Information Management System (ISIMS) project began formally in November 2001 and was terminated three years later, in December 2004. The project had both positive and negative impacts. Positive impacts included school and district recognition of the need for standardized data collection, understanding of technology issues, and awareness of technological limitations. Negative impacts included poor morale, during and after the project, as well as reservations about future public-private partnerships.*

*Future efforts by the Board of Education and the Department of Education to improve the collection and maintenance of student information in Idaho would benefit from the lessons of the ISIMS project. In Idaho's unique educational context, technology projects should clearly define the roles and responsibilities of all stakeholders and take steps to ensure end users are adequately involved at each stage. In addition, technology projects should maintain a realistic project scope, supported by realistic expectations of technology and an updated project plan.*

*Currently, the general approaches taken by the Board of Education and the Department of Education to address student information management lack cohesion and clear direction. The department's current projects to improve student information collection, however, represent manageable steps that align with best practice.*

*The object of this report has been to identify lessons that may be constructively applied to future state efforts, not to assign blame for past failures or credit for successes. In line with this objective, we chose to actively pursue independent sources of information from a broad range of ISIMS stakeholders. We have not identified the subject in all instances in order to maintain a constructive tenor throughout.*

## **ISIMS Had Both Positive and Negative Impacts**

The termination of the ISIMS project has affected the state in a number of ways that should be considered as the state implements new educational technologies:

***Recognition of the need for standardized data collection.*** Survey respondents who had participated in ISIMS were more likely than non-participants to recognize the need for better reporting to the department, a data dictionary, a unique student identifier, and a standards-based grade book. Over 83 percent of survey respondents in ISIMS schools and districts (and nearly 66 percent of respondents in non-ISIMS schools and districts) indicated that Idaho needs a statewide system for student information management.

***Understanding of technology issues, capabilities, and limitations.*** Some school and district staff (31 percent) responding to our survey indicated that staff in their school or district gained a better awareness of technology issues through their preparations for ISIMS. Inspections of district networks conducted by ISIMS project contractors in 2004 also contributed to a better understanding of the limitations of district technology capabilities.

***Impact on morale and credibility.*** Both the ISIMS project and its eventual termination had a negative impact on morale and credibility at the school, district, and state level. Over 60 percent of survey respondents reported that preparing for or piloting ISIMS had a negative impact on morale in their school or district. As a result of their experience with the ISIMS project, school and district staff, the department, and legislators have expressed reservations about future initiatives.

***Existing infrastructure.*** Inspections of district networks in 2004 identified poorly configured local area networks and the lack of a statewide wide area network as major challenges in establishing and maintaining connectivity with some districts. However, ISIMS contractors were not allowed to assist districts in addressing these issues, and the department has not determined how, or if, districts were able to implement changes based on the network review findings.

***Remaining hardware and software.*** Between 2003 and 2005, the Department of Education spent over \$1.1 million of state and federal funds on ISIMS. These expenditures included the purchase of a partially-completed data warehouse that was designed for ISIMS and does not meet the state's current needs.

## **ISIMS Design and Management Contributed to Failure**

In May 2006, the *New York Times* observed that many states' efforts to develop student information management systems "have cost more or taken longer than expected."<sup>1</sup> Studies conducted by the Standish Group research firm between 1994 and 2001 showed that, on average, nearly a third of private-sector

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<sup>1</sup> Sam Dillon, "States Struggle to Computerize School Records," *New York Times* (May 15, 2006).

information technology projects fail.<sup>2</sup> The ISIMS project was complicated by Idaho's unique educational context, as well as by management factors that affect information technology projects in general.

***District differences should be considered when developing statewide systems.*** Compounding the risks of information technology projects in general, implementing new educational technologies requires coordination with a broad range of stakeholders. These stakeholders include the Board of Education, the Department of Education, 114 independently-operated school districts, and an increasing number of charter schools.

***The board and the department should clearly define roles.*** Roles and responsibilities for the ISIMS project were ill-defined. The dynamics of the public-private partnership further limited state oversight and control. While motives differed, responsibilities between stakeholders were also blurred, limiting the effectiveness of leadership. Due to an inadequate state oversight role, direct state fiscal contributions to the project were poorly invested.

***The state should ensure end users are involved.*** The ISIMS project operated on an insufficient understanding of the practical needs and the technological and fiscal resources of end users (local and state staff), and it did not fully benefit from the technical expertise of staff at the district, project, and state level. Although a known risk since 2002, a thorough assessment of district networks was not conducted until 2004, the final year of the ISIMS project.

***The state should have realistic expectations of technology.*** The ISIMS project was based on unproven technologies; vendors were chosen without a clear understanding of requirements and district resources. The success of a centrally-based ISIMS relied on a stable infrastructure, which the state did not possess.

***The state should have a realistic plan.*** The ISIMS project lacked a reasonable scope and was not based on manageable stages of development and implementation. In addition, managers did not update the project plan after ISIMS expanded in 2003 from a single-vendor, two-part system to a multiple-vendor, five-part system. As a result, project managers were not able to comprehend, respond to, or effectively communicate these changes, and system components were implemented without thorough testing.

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<sup>2</sup> The Standish Group International, *Extreme Chaos* (Standish Group, 2001), 2, 5; "Project management: Overdue and over budget, over and over again," *The Economist* (June 9, 2005), 57-8.

## **New Projects Should Benefit from ISIMS Lessons**

Current efforts by the Department of Education represent manageable stages toward improving statewide student information collection and management, which is in line with best practice. However, these efforts have not yet fully benefited from the lessons of the ISIMS project. For example, the roles the department, the board, and districts will play in developing and implementing a data dictionary and unique student identifier have not been clearly defined. In addition, technical and management staff in the department expressed differing views on the direction the state should be taking in this regard.

The board and the department should model cooperation and realistic planning at the state level. Effective planning through cooperation should respond to the needs and capabilities of schools and districts, utilize proven technology solutions, and clearly define the roles and responsibilities of all stakeholders, including the board, the department, and bureaus within the department.

## **Recommendation**

The checklist provided in exhibit A may serve as a guide to future information technology projects. By addressing the lessons of the ISIMS project when implementing new initiatives, agencies and lawmakers can ensure a greater degree of confidence and success.

## **Acknowledgements**

We appreciate the cooperation and assistance we received from the Department of Education and the Office of the Board of Education in conducting this study. We also appreciate the input we received from the following entities:

- Legislative Audits, Legislative Services Office
- Budget and Policy Analysis, Legislative Services Office
- Division of Financial Management, Office of the Governor
- Office of the State Controller
- Idaho Geospatial Information Service Center, Department of Administration
- Idaho Education Technology Association

Rachel Johnstone (project lead), Amy Lorenzo, and TJ Thomson of the Office of Performance Evaluations conducted the study. Jeffrey Conor, an intern from Oberlin College (Ohio), assisted with research. Ned Parrish performed the quality control, and Margaret Campbell was the style editor and publisher.

Additional assistance was provided by Kathleen Sullivan, Ph.D., Professor and Director of the Center for Educational Research and Evaluation, University of Mississippi.

## **Exhibit A: Best Practices Checklist for Information Technology Projects**

### **Clearly Defined Roles and Responsibilities**

- ☐ Are stakeholders clearly identified?
- ☐ Are the roles and responsibilities of all parties clearly defined?
- ☐ Does executive management have sufficient expertise and authority for contract oversight and budget control?

### **User Involvement**

- ☐ Have the needs of end users been identified and incorporated into the project objectives?
- ☐ Have *existing* resources (infrastructure, time, staff, funding) been identified and incorporated into the project development plan?
- ☐ Does the project have a clear method for two-way communication between end users with technical expertise and project management and executive leadership?

### **Realistic Expectations of Technology**

- ☐ Have vendors provided a clear statement of requirements that addresses end user needs and project objectives?
- ☐ Are the components of the project based on established or proven technologies?

### **Proper Planning**

- ☐ Is the project divided into manageable stages of development and implementation?
- ☐ Is the project guided by a continually-updated project plan?
- ☐ Does the project have a clear method for regularly distributing updated planning documents to stakeholders?

Source: Office of Performance Evaluations.





# Chapter 1

## Introduction

*In 2005 and 2006, legislators expressed concern that the lessons of the Idaho Student Information Management System (ISIMS) project were not fully understood. Our evaluation is designed to identify lessons that may be applied to future efforts by the Board of Education and the Department of Education. This chapter describes the evaluation methodology and provides a glossary of technical terms.*

### Legislative Interest and Study Mandate

At its March 2006 meeting, the Joint Legislative Oversight Committee reaffirmed its direction that the Office of Performance Evaluations evaluate the Idaho Student Information Management System (ISIMS) to determine what lessons can be learned from the failed project. In 2005, the Senate Education Committee submitted a request to the Joint Legislative Oversight Committee for a review to assist the Board of Education and the Department of Education in applying lessons from the project to future efforts.

This evaluation focused on the following questions, as they relate to future student information collection and management efforts by the state:

- What were the overall goals for and specific expectations of ISIMS, and were those goals and expectations clear and reasonable?
- What were the state, district, and private responsibilities of ISIMS, and were those responsibilities clear?
- Were end users (district staff) sufficiently involved and initiatives appropriately staffed throughout in the development of ISIMS?
- What internal controls, such as performance measures, guided planning for and development of ISIMS, and were those controls reasonable and measurable?
- How well were conditions and decisions affecting the development of ISIMS communicated to stakeholders by executive management?

- How will state assets that were developed during ISIMS be used for future efforts to manage student information?

## Methodology

The object of this report has been to identify lessons that may be constructively applied to future state efforts, not to assign blame for failures or credit for successes. In line with this objective, we chose to actively pursue independent sources of information from a broad range of ISIMS stakeholders. We have not identified the subject in all instances in order to maintain a constructive tenor throughout. To address the questions raised by legislators, we employed the following methods:

- Visited four school districts and one charter school that had participated in ISIMS—Highland (Craigmont), Jerome, Lewiston, McCall, and Meridian Charter High School. These sites were chosen to represent enrollment groups, regions, technology funding sources, and existing student information systems.
- Interviewed stakeholders, including management and staff of the Department of Education and the Board of Education, former staff of the ISIMS project, and officials of the JA and Kathryn Albertson Foundation.
- Surveyed district superintendents, school principals and administrators, and technology coordinators in Idaho's public schools. Our survey was piloted by members of the Idaho Educational Technology Association and other school district staff, as well as by the department, the office of the board, and Legislative Audits staff. Using a web-based electronic format, we distributed the survey to 753 staff with valid e-mail addresses in 114 school districts, as well as charter schools, juvenile corrections centers, the Idaho School for the Deaf and the Blind, and the State Hospital South. We received responses from 288 individuals for an overall response rate of 38.2 percent.<sup>1</sup> Response rates by region and ISIMS participation are provided in exhibit 1.1. We tested the data to determine if there was a statistically significant difference between staff in ISIMS and non-ISIMS schools and districts using a standard *t* test. Where statistically significant differences were found, we have reported responses separately.

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<sup>1</sup> Based on this sample size, sampling error at the 95 percent confidence level is  $\pm 4.6$  percent.

- Surveyed 61 former ISIMS staff, including employees of the Department of Education and the Albertson Foundation, and consultants, vendors, and contracted managers. We received responses from 40 individuals for a response rate of 65.6 percent. Because this diverse population was unique to the ISIMS project, responses to this survey should not be considered statistically representative of any particular subgroup (e.g., managers or vendors).
- Reviewed legislative history and historical documents from the ISIMS project, including state financial records and data reported to the US Internal Revenue Service.
- Reviewed current assets as well as current and future plans of the Department of Education and the Board of Education.
- Reviewed best practice literature regarding information technology projects in government and private settings and public-private partnerships. We consulted with staff of the Office of the State Controller and Legislative Audits, and reviewed Legislative Audits' studies of projects by the Idaho State Tax Commission and the Department of Water Resources.

### Exhibit 1.1: School and District Staff Survey Response Rates

	Number of Respondents	Response Percentage
<b>Total (n=288)</b>	288	38.2%
<b>By Region<sup>a</sup></b>		
Region 1 (n=97)	32	33.0
Region 2 (n=69)	32	46.4
Region 3 (n=227)	89	39.2
Region 4 (n=89)	40	44.9
Region 5 (n=81)	34	51.9
Region 6 (n=115)	55	47.8
<b>By ISIMS Participation<sup>b</sup></b>		
Non-ISIMS schools and districts (n=355)	150	37.7
ISIMS schools and districts (n=398)	138	38.9

<sup>a</sup> Excludes charter school respondents (6 total) (n=282).

<sup>b</sup> Includes charter school respondents (6 total) (n=288).

Source: Office of Performance Evaluations' survey of public school and district staff (superintendents, principals, administrators, and technology coordinators), May 2006; analysis of information from the Department of Education and Idaho Code § 33-1002D.

- Reviewed student information collection and management methods and systems in our six neighboring states: Montana, Nevada, Oregon, Utah, Washington, and Wyoming.
- Interviewed officials of the US Department of Education's National Center for Education Statistics.

Our methods were designed to comprehensively consider the views and experience of all stakeholders, regardless of the following limitations on information available from the foundation and the board:

- The JA and Kathryn Albertson Foundation retains ownership of all intellectual property designed or purchased for the ISIMS project, including documentation. The foundation has declined our requests for project documentation, including reports and reviews of the project and its lessons submitted by the foundation's management contractors. For this reason, we were not given the opportunity to extensively review the management structures of the foundation or its contractors, or to extensively validate the foundation's cost estimates for ISIMS, which substantially contributed to the foundation's decision to halt the project.
- The Office of the Board of Education has not conducted the management and financial review of the ISIMS project requested by the board in December 2004. In anticipation of this review, the Joint Legislative Oversight Committee directed us to study ISIMS lessons in a way that would complement, rather than duplicate, the board's review. Because the office of the board did not conduct a management and financial review of the ISIMS project, we expanded our scope and methods to include some review of state and foundation financial matters that might otherwise have been addressed by a board review.

The object of this report has been to identify lessons that may be constructively applied to future state efforts, not to assign blame for failures or credit for successes. In line with this objective, we chose to actively pursue alternative and independent sources of information rather than rely on information that might have been obtained through formally contesting the foundation's decision to withhold documentation from public scrutiny.

We considered the views and experience of all stakeholders, and our conclusions are supported by evidence and documentation we obtained from alternative and independent sources. As such, we believe the introduction of any new evidence from the foundation regarding its own management practices would not alter the lessons we have identified, or compromise the value of those lessons to state and local educational entities.

## Glossary

**Bandwidth** is a measure of the *maximum* capacity of a network to transport and receive information between workstations, buildings, and between districts and the outside world (expressed in bits per second). Bandwidth is initially determined by the physical capacity of a connection and can be negatively or positively affected by environmental factors (such as geographic isolation or availability of service providers).

**Course codebook**, or a common course code system, is a compilation of instructional courses identified by a standardized number. When used statewide along with a unique student identifier and data dictionary, this system would allow districts to transfer records from one district to another and allow the state to access aggregate information. A common course codebook is not presently in place in Idaho.

**Data dictionary** is a collection of precise definitions for the elements of data collected by student information systems and housed in a data warehouse. This dictionary, along with a unique student identifier and system of common course codes, allows many users (districts) to submit information in a uniform way, streamlining reporting and analysis processes.

**Data warehouse** is a central repository of data that allows users—in this case state or district staff—to access information to conduct analysis and produce reports.

**Local Area Network (LAN)** is a network used to transport information within a limited space, such as between workstations within a building.

**School Interoperability Framework (SIF)** is a national specification for sharing data between multiple software programs. SIF was designed to prevent redundant data entry and increase access and efficiency.

**Unique student identifier** is a unique number or alphanumeric string that anonymously identifies an individual student. Along with a common course code system and a data dictionary, a unique student identifier allows districts to transfer records from one district to another and allows the state to use aggregate information to monitor the effectiveness of the education system over time.

**Wide Area Network (WAN)** is a network that links local area networks (LANs) together and facilitates the transfer of information between LANs. A WAN may connect LANs within a single district, or across multiple geographic regions, states, or countries. In this report, WAN generally refers to a statewide WAN that connects districts.



## Chapter 2

# Overview of the ISIMS Project

*The Idaho Student Information Management System (ISIMS) project was formally established between the Department of Education and the JA and Kathryn Albertson Foundation in 2001. During development, the foundation retained “absolute and sole discretion over and control of” the ISIMS project. In 2004, piloting and initial implementation of ISIMS in 29 Idaho school districts raised concerns about district readiness and system functionality. The foundation terminated the project in December 2004. The Department of Education spent over \$1.1 million of state and federal funds on products and services, including staff time, to develop ISIMS between fiscal years 2003 and 2005. According to data reported to the US Internal Revenue Service, the foundation spent approximately \$23 million for ISIMS-related charitable activities and consultants between calendar years 2001 and 2004.*

### Vision

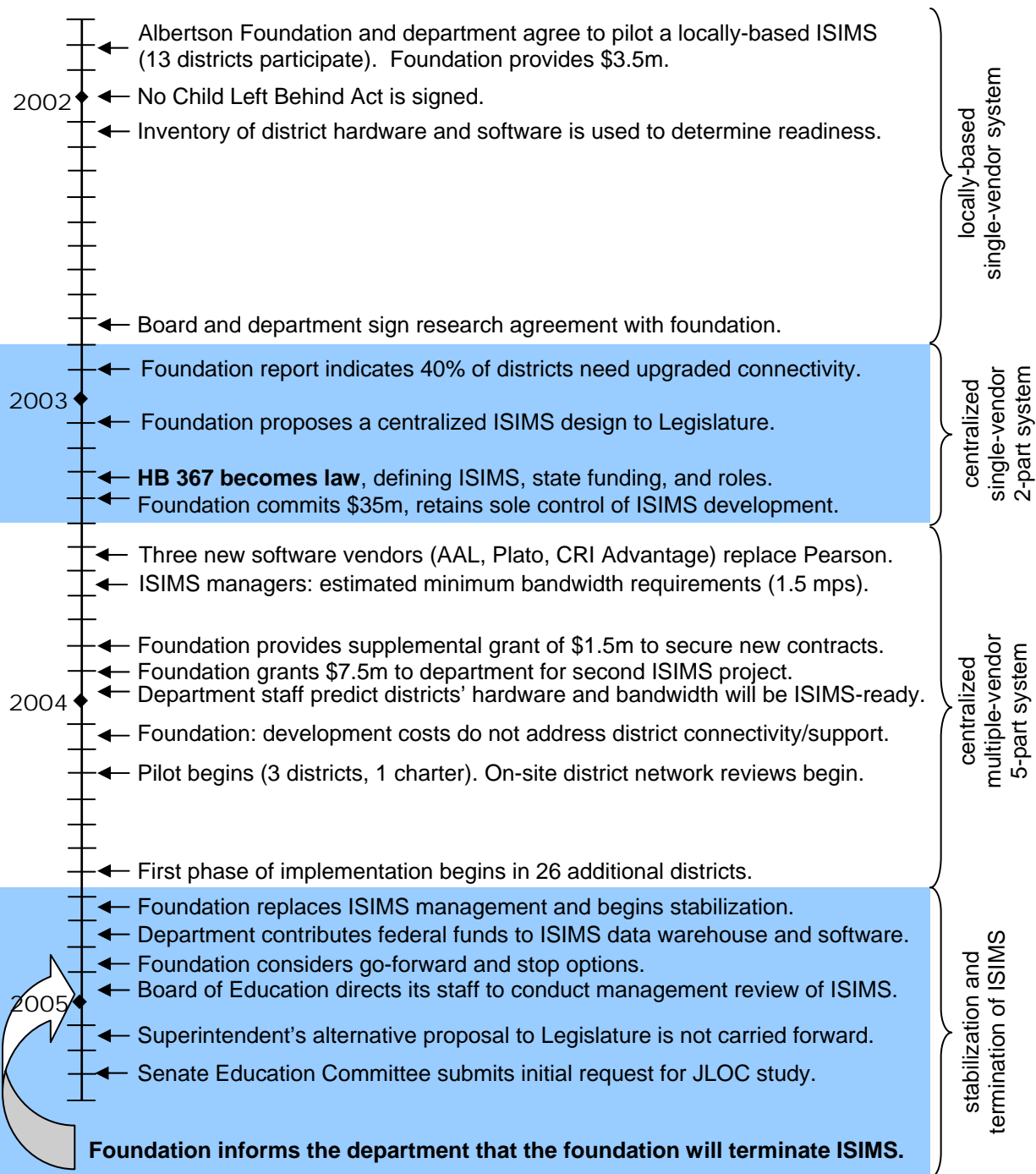
In 1998, staff in the Department of Education’s Bureau of Technology Services developed a vision for a statewide system of collecting and managing student information. This system would use locally-based, uniform software, and facilitate information-sharing between school districts and state government over a statewide network. The original concept estimated a five- to seven-year implementation schedule.

The original concept formed the basis of the Idaho Student Information Management System (ISIMS) project. The project began *formally* in November 2001 when the department entered into an agreement with the JA and Kathryn Albertson Foundation.<sup>1</sup> A timeline of major ISIMS events is detailed in exhibit 2.1.

One of the many goals of the ISIMS project was to indirectly improve student learning by enhancing the ability of parents, teachers, district and state officials, education contractors (e.g., testing contractors), and the foundation to make decisions based on accurate and timely information. Expectations of what the

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<sup>1</sup> During the 2002 legislative session, the State Department of Education requested \$2 million for ISIMS in fiscal year 2003. However, the Legislature did not fund that request. Idaho Legislature, House Education Committee, January 15, 2002.

**Exhibit 2.1: Timeline of ISIMS Project Events, 2001–2005**

Source: Office of Performance Evaluations' analysis of documents from the State Department of Education, the State Board of Education, and the Idaho Student Information Management System project.



project would eventually deliver were likewise broad and relevant to many Idaho stakeholders:

- Secured information storage in a central location
- Uniform software in a central location for use by all public schools
- Streamlined systems and processes and electronic records transfer
- Updated and immediately-available information
- Tools for managing standards-based learning, analysis, and reports
- Standardized data definitions and quality standards
- Appropriate access for parents, teachers, district and state officials, education contractors, and the foundation at any time in an understandable format

From 2003 to 2005, Idaho Code defined ISIMS as “a secure, centralized data system where public school information is stored, accessed and analyzed. The system is comprised of two (2) parts: the first part includes a uniform package of software applications used by all public schools in Idaho for student related administrative functions. The software applications shall handle such functions as student scheduling, grade reporting, attendance, recordkeeping, student achievement and teacher resources; the second part is a data warehouse where public school data are stored and contains a number of report-generating software applications.”<sup>2</sup>

While the broad purposes of the project are clearly articulated in these goals, stakeholders had different practical expectations for what ISIMS would provide. School and district staff we spoke with indicated that an interest in improving their student information management software and ability to provide information to parents were driving factors in ISIMS participation. The department’s objectives for ISIMS included a unified solution to state and federal reporting requirements. The Albertson Foundation had an interest in access to data that would measure the “results of educational initiatives sponsored or contemplated by the foundation in an effort to improve instruction and improve educational initiatives in the state of Idaho.”<sup>3</sup>

## Development

A department study in February 2001 declared that “over the past six years Idaho has become a light house to the nation, an exemplar of integration of technology into our schools.”<sup>4</sup> A department official observed at the June 2006 meeting of

<sup>2</sup> H. 367, 57th Leg., 1st Sess. (Idaho 2003), §3(7). Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006).

<sup>3</sup> Research Agreement, signed by the State Board of Education, State Department of Education, and JA and Kathryn Albertson Foundation, October 10, 2002.

<sup>4</sup> Idaho Council for Technology in Learning, Idaho Department of Education, *The Idaho Technology Initiative: An Accountability Report to the Idaho Legislature* (February 2001), 1.

the Idaho Council for Technology in Learning that Idaho school districts were technologically at a peak in 2000 and 2001 following the influx of Albertson Foundation grants totaling \$27.4 million for new equipment.<sup>5</sup>

In November 2001, the Department of Education entered into a \$3.5 million grant agreement with the Albertson Foundation to allow school districts to purchase locally-managed uniform student information management software. The department and the foundation chose Pearson Education Technologies to provide this uniform software package, which would include pieces for student information, curriculum management, and analysis and reporting.<sup>6</sup> Software would be installed and managed in a way standard to all participating districts (see the district model in exhibit 2.2).

As shown in exhibit 2.3, 13 Idaho school districts participated in this initial ISIMS project in the 2001–2002 school year. This limited scope project is generally known as “ISIMS I” and was replaced by “ISIMS II” in 2003.

The department conducted an inventory assessment in early 2002 by comparing the number of hardware and types of software in each district with ISIMS

The speed of an internet connection cannot be solely measured by the size of the line. For example, a “DSL” or “T1” line is *theoretically* capable of carrying 1.5 mega bits of information per second (mbs), but may carry significantly less information at any given time depending on (1) how many other service clients or other district computers are accessing the line, and (2) whether the line and the computers connected to it are configured efficiently. In other words, even if every district in Idaho was wired with T1 lines, internet access may not be the same for all districts. The “committed” or guaranteed rate at which information is relayed over a network or internet connection would be a better measure of true capacity.

requirements, as stipulated by the agreement between the department and the foundation. Because this assessment was not conducted on-site and did not involve detailed mapping of districts’ infrastructures, the department’s work could offer only limited insight into district technological readiness to meet ISIMS requirements. Equipment inventories alone may overestimate capacity and cannot appropriately gauge the effectiveness of a district’s complex information technology network. Chapter 4 discusses the need to involve schools and districts in state plans by conducting thorough assessments of their resources and needs.

In fall 2002, the foundation financed a study to determine the steps needed to move forward through the first of several transitions of the ISIMS project. This study estimated that 40

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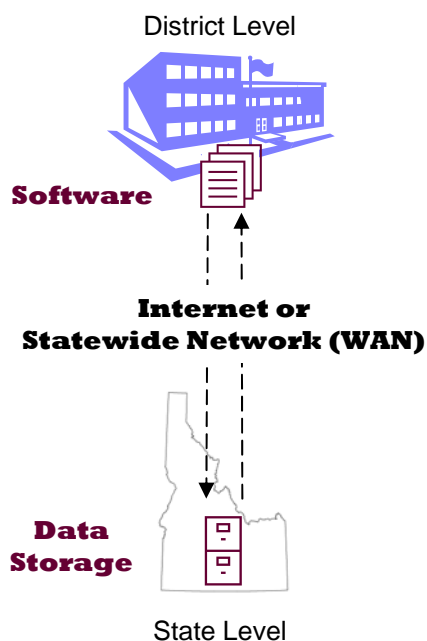
<sup>5</sup> In addition, between 1995 and 2001, Idaho public schools received \$71.3 million of technology grants funded through the Idaho Educational Technology Initiative. By the time the ISIMS project was terminated in 2004, as discussed in our 2005 report on education technology initiatives, Idaho students had good access to computers, but these computers were aging and older than the average in some neighboring states and across the nation. Idaho Legislative Office of Performance Evaluations, *Public Education Technology Initiatives*, Report 0501 (January 2005), 4, 7.

<sup>6</sup> Pearson’s student information management software was called *SASLxp*; its curriculum management software was known as *CONCERT*.

## Exhibit 2.2: District and Centralized Models for Student Information Management Systems

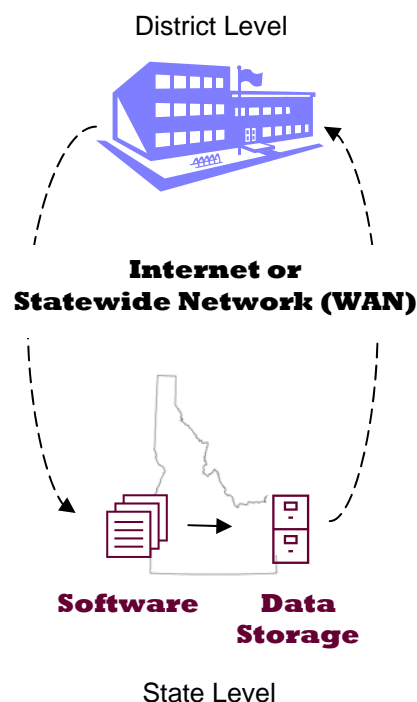
### District Model

- Software may be either dictated by state or chosen by districts
- Software is hosted at the district level and serves schools in that district
- Each district transfers information to a single, centralized data warehouse
- Only *selected* information collected at the school/district level is transported back and forth between districts and state



### State (Centralized) Model (e.g., ISIMS)

- All districts use the same software
- Software is hosted for all districts in a single, centralized location
- Information is maintained in a single, centralized data warehouse
- All student information is transported back and forth between districts and state



Note: A hybrid model may be formed by any combination of these two models. A regional model would be similar to a district model, but software would be hosted at a central location within a region for districts in that region.

Source: Office of Performance Evaluations' analysis of documents from the Idaho Student Information Management System project.

### Exhibit 2.3: Idaho School Districts Participating in ISIMS Pilots and Implementation Phase, School Years 2001–2005

	ISIMS I Pilot (2001-02)	ISIMS II Pilot (2004)	ISIMS II Phase I (2004)
Aberdeen			x
American Falls			x
Basin			x
Bliss			x
Boise	x		
Buhl			x
Cascade			x
Coeur d'Alene	x		
Cottonwood			x
Culdesac			x
Filer			x
Firth		x	
Fruitland	x		
Grangeville			x
Highland			x
Homedale	x		
Horseshoe Bend			x
Idaho Falls	x		
Jerome	x		x
Kamiah			x
Kellogg		x	
Kimberly			x
Kuna		x	
Lapwai	x		
Lewiston			x
Marsing			x
McCall-Donnelly	x		x
Meadows Valley			x
Melba			x
Meridian	x		
Meridian Charter High School		x	
Middleton	x		
Midvale			x
Mountain Home	x		
Nampa	x		
Nezperce			x
North Gem			x
Pocatello	x		
South Lemhi			x
West Jefferson			x
West Side			x
	13	4	26

Source: Office of Performance Evaluations' analysis of information from the State Department of Education and documents from the Idaho Student Information Management System project.

percent of districts would have to improve their internet connections in order to participate in ISIMS.

One of the most significant technical challenges... [is] the infrastructure—or lack of it. Districts are at different levels in terms of an infrastructure so any plans to implement an ISIMS will have to address the inequities that exist... From an infrastructure perspective, a few districts are already in a position to participate effectively in a statewide student information system. However, the infrastructures of most districts will have to be enhanced, some dramatically.<sup>7</sup>

Based on the recommendations of this foundation study, the plan for implementing the ISIMS project shifted. ISIMS would now host Pearson software and store district information from a single, central location. This centralized model (see exhibit 2.2) was proposed to the Legislature as House Bill 367 during the 2003 legislative session.

### **Legislation**

House Bill 367 defined ISIMS as a two-part system: a centrally-hosted uniform package of software applications and a data warehouse. For maintenance of this system, the legislation provided for an unspecified state funding commitment based on operational expenses in fiscal year 2005.<sup>8</sup>

During the 2003 legislative session, foundation officials offered to contribute \$35 million to develop ISIMS. This offer would remain “open until the end of the 2003 legislative session” and was contingent on the foundation receiving “an answer from the Legislature by April 30” regarding a state commitment.<sup>9</sup> The timeframe for consideration and passage of House Bill 367 left little time to examine the accuracy of state cost projections or to resolve district connectivity (and associated costs) and state oversight. Shortly after the bill was passed, the Board of Education approved policies regarding ISIMS, and in May 2003, the Governor, the board, and the Superintendent of Public Instruction signed an

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<sup>7</sup> Contractors delivered this study to the foundation and ISIMS management in December 2002. The ISIMS project began conducting local network analysis in spring 2004. In March 2004, the Legislature allocated fiscal year 2005 technology resources for districts to prepare for participation in ISIMS.

<sup>8</sup> The language indicated that, for ongoing maintenance of ISIMS, the Legislature should annually fund “an amount not less than that expended by the state and the J.A. and Kathryn Albertson [F]oundation combined, on *operation* of the project in fiscal year 2004–2005.” For this reason, an appropriate definition of responsibility for “operation of the project” was crucial. The bill’s fiscal note estimated the state obligation for this maintenance funding to total \$70 million over ten years. H. 367, 57th Leg., 1st Sess. (Idaho 2003). Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006).

<sup>9</sup> Idaho Legislature, Senate Education Committee, January 30, 2003; February 13, 2003; April 1, 2003.

agreement with the Albertson Foundation to develop and implement ISIMS.<sup>10</sup> The proposed timeline for ISIMS was divided into four phases, with a completion date of September 2005.

### ***Responsibilities and Rights***

Formal agreements between the State of Idaho (including the department) and the foundation described the rights of each partner. Through these agreements, the foundation retained “absolute and sole discretion over and control of” the funding commitment, supervision, design, expenditures, management and operation of the project during the development phase, and the date the system would be handed over to the state.<sup>11</sup> Although the department was to execute contracts for the project, the foundation retained ownership of all hardware, software, or intellectual property designed or purchased for ISIMS because the project was terminated before completion of the development phase. The foundation’s agreement with the State of Idaho specified the project could be terminated by the foundation, for any reason, with 15 days notice. In addition, the foundation retained the right to terminate its funding contributions “at any time for any reason.”<sup>12</sup> Chapter 4 discusses the importance of establishing clear state oversight of private interests.

The state’s funding commitment for ISIMS maintenance was to begin in fiscal year 2006 when the foundation was to turn a fully functional ISIMS (as defined in statute) over to state management. However, the hand-over timeline was subject to exceptions defined in agreements with the foundation. The May 2003 agreement between the Governor, the board, the department, and the foundation gave the foundation discretion to decide *when* the hand-over would occur. Further, the December 2003 funding agreement between the department and the foundation went beyond statutory authority by declaring subjectively that this hand-over—and therefore the initiation of state funding—would occur when ISIMS was “substantially complete.” In January 2005, a foundation official further argued that Idaho Code had “merely contemplated” rather than defined ISIMS as a system that provided “a ‘uniform package of software applications’ used by public schools.”<sup>13</sup> This situation highlights the importance of ensuring that all parties agree on project goals, as well as roles and responsibilities, as discussed in chapter 4.

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<sup>10</sup> State Board of Education, Governing Policies and Procedures IV.B(10): *Idaho Student Information Management System* (May 2003).

<sup>11</sup> Idaho Student Information Management System Agreement, signed by the Governor of Idaho, the State Board of Education, the State Department of Education, and the JA and Kathryn Albertson Foundation, May 30, 2003.

<sup>12</sup> Ibid.; Grant Agreement, signed by the State Department of Education and the JA and Kathryn Albertson Foundation, December 18, 2004. Foundation officials also announced these termination rights to a joint meeting of the House and Senate Education Committees in February 2004.

<sup>13</sup> A. Craig Olson, President, *JA and Kathryn Albertson Foundation*, letter to Rakesh Mohan, Director, *Office of Performance Evaluations*, 5 January 2005.

State-level agreements did not fully distinguish between private, state, and local responsibilities. Agreements and statute inconsistently assigned responsibility for project implementation. Idaho Code gave the board responsibility for seeing ISIMS implemented, but *the foundation controlled funding for implementation* through its funding agreement with the department. In actual practice, *the foundation also controlled ISIMS' development and implementation.*<sup>14</sup>

In 2004, while the foundation and the department were preparing to pilot ISIMS in three districts and one charter school, foundation officials told the Legislature that the foundation's \$35 million commitment for development of the system did not address adequate bandwidth, hardware, or support at the district level. The foundation maintained that such costs, as well as related planning, were the responsibility of "the state."<sup>15</sup> Because stakeholders did not reach detailed consensus on roles and responsibilities before the Legislature adopted House Bill 367, state-level planning did not fully address key "last mile" aspects of the project (such as adequate district bandwidth).

### **Project Organization**

The ISIMS project had a multi-part management and advisory structure, shown in exhibit 2.4. The management team included two officials and two management contractors from the foundation, and one representative of the Department of Education's Bureau of Technology Services. The technical operations team included three to seven staff who, while employed by the department, were funded and directed by the foundation and its managers. Additional staff joined the project throughout, including contractors for specific tasks.

The terms "ISIMS staff" and "former ISIMS project staff" refer generally to groups or individuals (state or private) who worked on the ISIMS project.

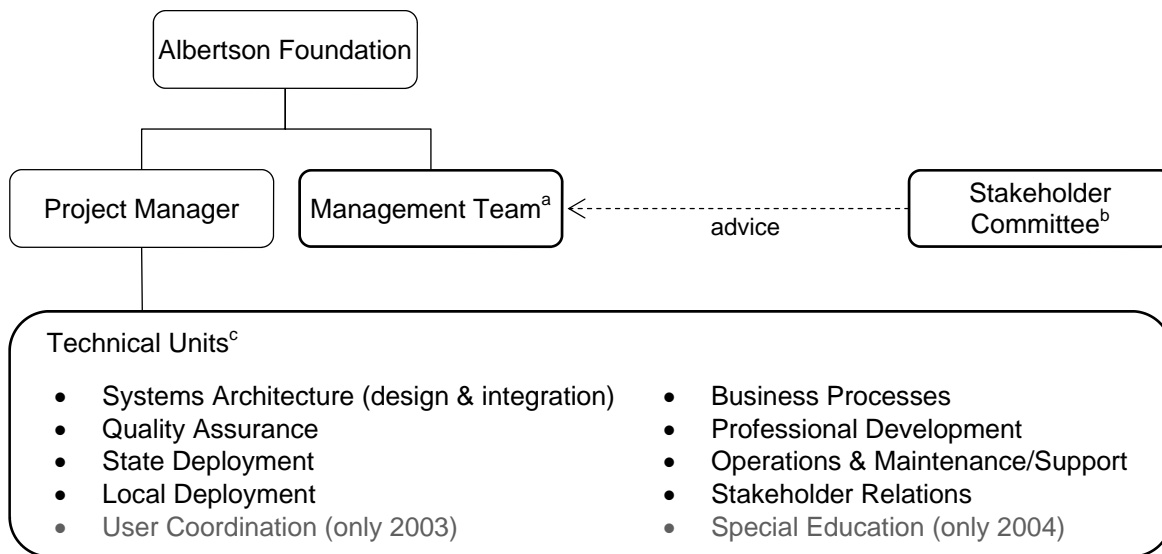
The foundation and the Governor's office jointly appointed a stakeholders' committee to generally advise the ISIMS project. This committee was chaired by the foundation and included representatives of the department, the board, and the Governor's office, as well Idaho schools and educational professional associations. In its agreement with the State of Idaho, the foundation pledged to make "reasonable efforts" to consider input and direction from the stakeholders committee when making management decisions.

### **Expansion**

In May 2003, a month after House Bill 367 had been signed, foundation consultants concluded that Pearson products would not be able to meet the goals of ISIMS. They noted that district connectivity remained a concern; that concern

<sup>14</sup> H. 367, 57th Leg., 1st Sess. (Idaho 2003). Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006).

<sup>15</sup> Idaho Legislature, Joint Senate and House Education Committees, February 4, 2004.

**Exhibit 2.4: General Organization of the ISIMS Project, 2003–2004**

<sup>a</sup> Included a representative of the Department of Education, Bureau of Technology Services.

<sup>b</sup> Included representatives of the Department of Education, the Board of Education, the Governor's office.

<sup>c</sup> Included state employees under the funding and direction of the foundation and its management contractor.

Source: Office of Performance Evaluations' analysis of documents from the Idaho Student Information Management System project.

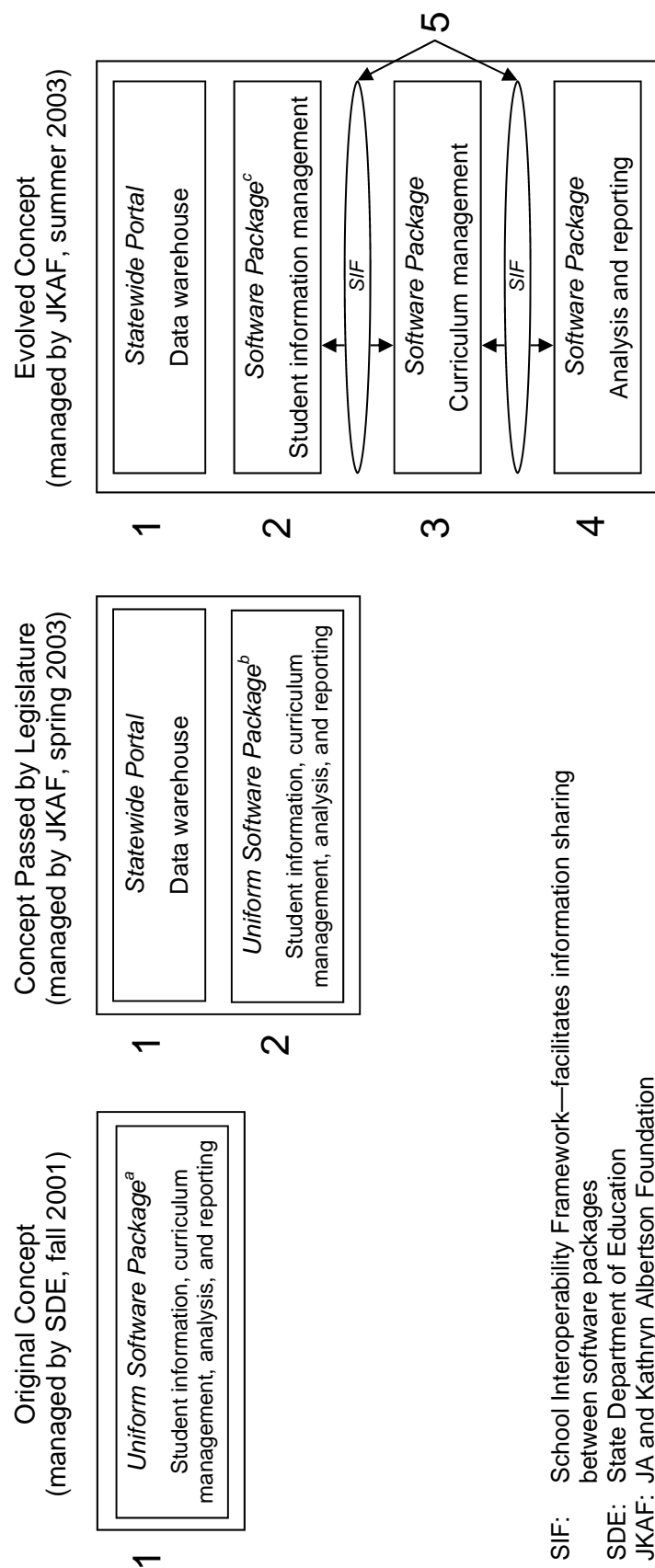
was compounded by the anticipated bandwidth requirements of Pearson applications, integration concerns with those applications, and the lack of a statewide network. In July, a group of over 30 technical and management consultants, teachers and district staff, and state officials reviewed proposals by four student information software vendors (including Pearson) and two curriculum management software vendors (including Pearson). The results of this review were announced publicly in November, when the foundation granted the department \$1.5 million to secure new vendor contracts.

These new vendor contracts resulted in an expansion of ISIMS from a two-part system to, ultimately, a five-part system, as shown in exhibit 2.5. The timelines for implementation and funding, however, remained unchanged, and the subsequent project no longer clearly aligned with the statutory or contractual definitions of ISIMS upon which state financial obligations were based.<sup>16</sup> Former staff of the ISIMS project who responded to our survey indicated this change had long-term implications for the success of the project, as discussed in chapter 5.

<sup>16</sup> H. 367, 57th Leg., 1st Sess. (Idaho 2003), §3(7). Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006).



## Exhibit 2.5: Evolution of ISIMS, 2001–2004



SIF: School Interoperability Framework—facilitates information sharing

SDE: State Department of Education

JKAF: JA and Kathryn Albertson Foundation

<sup>a</sup> Because this concept was based within districts, it did not include a statewide portal and data warehouse.

<sup>b</sup> Concept was based centrally, in Boise, necessitating a statewide portal and data warehouse.

<sup>c</sup> Represents the only software that 29 districts and 1 charter school actually converted.

Source: Office of Performance Evaluations' analysis of H. 367, 57th Leg., 1st Sess. (Idaho 2003). Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006); documents from the Idaho Student Information Management System project, and the State Department of Education. Part of this exhibit was originally published in Office of Performance Evaluations, *Public Education Technology Initiatives* (January 2005), 59.

A new grant agreement between the department and the foundation in December 2003 set aside \$7.5 million to implement a student information management system that included functions for special education and software for curriculum management, reporting, and analysis. Three different vendors were to supply these applications:

- (1) Administrative Assistants Ltd., a Canadian firm, was to provide student information management software (*eSIS*).
- (2) Plato Learning, Inc., a Minnesota firm, was to provide curriculum management software (*Orion*).
- (3) CRI Advantage, Inc., an Idaho firm, was to provide data warehousing, reporting, and analysis software (*Academic Accelerator LLC*).

As shown in exhibit 2.5, the ISIMS project would have to rely on the School Interoperability Framework (SIF) to ensure each application could interact with the others. This programming standard is discussed further in chapter 5.

During spring 2004, three districts and one charter school began to pilot ISIMS, and contractors for the foundation began on-site inspections of school district networks. In August, 26 additional districts began the first of three phases of district implementation. Due to continued problems integrating student information and curriculum management applications, the ISIMS project rolled out only the student information management software to districts in either the pilot or first phase of implementation. Contracts to begin developing the data warehouse—part of the original statutory and contractual definition of ISIMS—were not settled until July 2004.

## **Stabilization and Termination**

District staff who participated in ISIMS implementation told us they received conflicting messages from ISIMS project staff; district staff also struggled with slow or dropped connections to the application, a general lack of functionality, and an inability to access support. Former staff of the ISIMS project who responded to our survey noted these problems:

The technical problems within the various school districts were a major frustration for the people within the schools. Many times the connections were slow and people had to wait, wait, and wait to get to the correct screen to complete a simple task.

In an October 2004 letter to participating districts, the foundation announced its efforts to stabilize ISIMS, including a new management and a new steering committee. The foundation stated that while the ISIMS vision and components

had not changed, “We have had some problems. It is very important to stabilize the system (software, hardware, and network) and gather lessons learned before adding functionality and moving on.”<sup>17</sup> At the request of the foundation, the department contributed federal assessment funds (totaling \$1 million) for the data warehouse and analytics software, beginning in November 2004 (see exhibit 2.6).

In December 2004, ISIMS project management presented the foundation with options for moving forward. In a press release, the foundation cited development costs expected to be millions in excess of its original commitment (as shown in exhibit 2.7), in addition to increased maintenance costs for the state. The foundation decided to “revise the goals, readjust the vision, reassess the project and work with our partners to reach a simpler, more workable, less costly but more achievable path forward.”<sup>18</sup> The foundation has not made public the documentation of the costs estimates that informed this decision. However, foundation officials told us these figures would have included monies to correct district data and address network inequities.

In December 2004, the Albertson Foundation informed the Department of Education that the foundation would be terminating the ISIMS project.<sup>19</sup> The foundation pledged to leave those affected by ISIMS (29 districts and 1 charter school) with a “useful student information system.” Illustrating a lesson learned from the ISIMS project, as discussed in chapter 5, the foundation encouraged districts to choose a “proven product currently being used in Idaho.”<sup>20</sup> The foundation offered one of three alternatives:

- *PowerSchool* (Apple Computer, Inc.)<sup>21</sup>
- *SASIxP* (Pearson Educational Technologies)
- *Schoolmaster* (Olympia Computing Co.)

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<sup>17</sup> Thomas Wilford, Chief Executive Officer, *JA and Kathryn Albertson Foundation*, letter to superintendents, principals, technology directors, curriculum coordinators, and ISIMS stakeholders committee, 15 October 2004.

<sup>18</sup> Chris Latter, Communication Officer, *JA and Kathryn Albertson Foundation*, media release, “JA and Kathryn Albertson Foundation To Revise ISIMS Goals,” 14 December 2004.

<sup>19</sup> Thomas Wilford, Chief Executive Officer, *JA and Kathryn Albertson Foundation*, letter to Dr. Marilyn Howard, State Superintendent of Public Instruction, *Department of Education*, 28 December 2004. In a March agreement with the department, the foundation provided a \$3.8 million grant for the termination phase of ISIMS. Idaho Student Information Management System (ISIMS) Termination Project Grant Agreement, signed by the State Department of Education and the JA and Kathryn Albertson Foundation, March 15, 2005.

<sup>20</sup> Thomas Wilford, Chief Executive Officer, *JA and Kathryn Albertson Foundation*, letter to superintendents, principals, technology directors, curriculum coordinators, and ISIMS stakeholders committee, 15 October 2004.

<sup>21</sup> Pearson Educational Technologies agreed to acquire *Powerschool* from Apple Computer in May 2006.

### **Exhibit 2.6: Department of Education Public Fund Expenditures and Distributions for ISIMS-Related Activities, Fiscal Years 2003–2005**

<b>Direct Department Expenditures</b>	<b>\$1,113,668</b>
Staff	109,668
Department staff overtime <sup>a</sup> (ISIMS implementation)	6,720
Department staff (ISIMS support)	102,948
Contracts	1,004,000
Data warehouse design and license <sup>b</sup>	690,306
Analytics and reporting software <sup>b</sup>	313,694
<b>Public School Grants</b>	<b>\$1,148,725</b>
Reported public school technology grant distributions <sup>c</sup>	628,725
Federal Title II-D competitive awards	520,000

<sup>a</sup> On June 21, 2005, the Board of Examiners obligated the department to shoulder 20 percent of the compensatory time accrued by grant-funded state employees during the ISIMS project. The department reports providing for this through a combination of time off and pay, totaling \$6,720.

<sup>b</sup> Paid with fiscal year 2002 federal Title VI-A funds.

<sup>c</sup> S. 1432, 57th Leg., 2nd Sess. (Idaho 2004) §4 appropriated \$5 million for one-time ISIMS-related district technology expenditures. For the 13 districts that reported expenditures for ISIMS or improvements related to student information management functions, these funds totaled \$628,725.

Source: Office of Performance Evaluations' analysis of documents from the Idaho Student Information Management System project, the State Department of Education, the Idaho Council for Technology in Learning, the State Board of Examiners, and Idaho Code.

In January 2005, a foundation official testified to the Joint Finance-Appropriations Committee that the alternative systems would cost the foundation approximately \$20 million.<sup>22</sup> According to district staff, remuneration from the foundation included monies for new software licenses, hardware upgrades, and training for one year. To this end, the foundation invested an undisclosed amount and provided support for ISIMS districts that chose to stay with ISIMS until the end of the 2004–2005 school year.

## **Financial Summary**

As shown in exhibit 2.6, the Department of Education spent over \$1.1 million of state and federal funds on products and services, including staff time, for ISIMS between 2003 and 2005. The assets remaining from these investments are discussed in chapter 3.

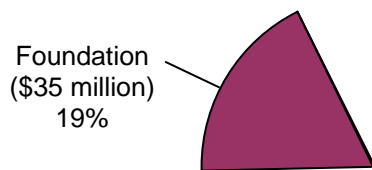
<sup>22</sup> The foundation declined our request for documentation to verify this figure. Joint Finance-Appropriations Committee, audio, January 24, 2005.

In addition to direct state expenditures, state and federal district technology grants for ISIMS totaled approximately \$1.1 million. In 2004, the Legislature directed that school districts use \$5 million of fiscal year 2005 Public School Technology grants to prepare for ISIMS.<sup>23</sup> Districts receiving technology grants were not required to document specific ISIMS-related expenditures. Our analysis of available information indicates at least approximately \$600,000 of technology grants were directed to ISIMS activities. The Legislature also directed the department to give districts with financial need (specifically, to prepare for or participate in ISIMS) priority for fiscal year 2005 competitive

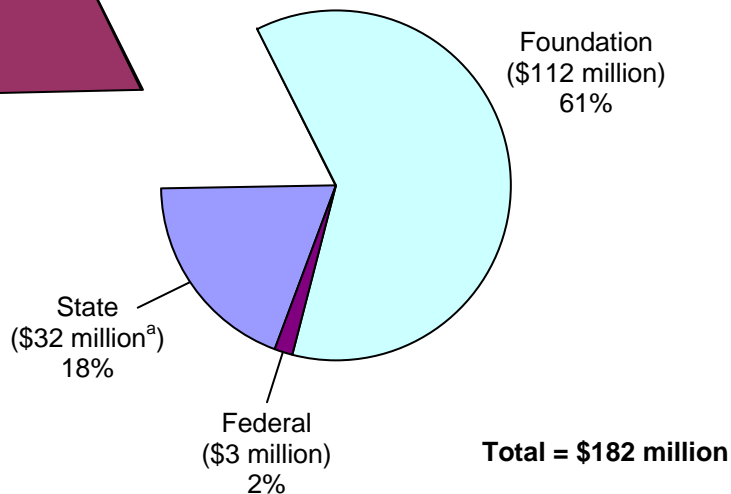
<sup>23</sup> These monies were part of annual appropriations for technology grants. In prior years, school districts used these monies for other one-time educational technology expenditures. S. 1432, 57th Leg., 2<sup>nd</sup> Sess. (Idaho 2004) §4.

### Exhibit 2.7: Breakdown of Original and Additional ISIMS Development Cost Estimates, Published by The JA and Kathryn Albertson Foundation, December 2004

#### Original Development Estimate



#### Additional Development Estimates



Note: In addition, the foundation also estimated the state would have maintenance costs of \$11 million annually, an increase from the original estimate of \$7 million.

<sup>a</sup> These funds represent original estimated state costs for maintenance of a developed ISIMS. The foundation's revised development estimate would have redirected maintenance funding to continued development costs.

Source: Office of Performance Evaluations' analysis of documents from the Idaho Student Information Management System project, including Chris Latter, Communication Officer, *JA and Kathryn Albertson Foundation*, media release, "JA and Kathryn Albertson Foundation To Revise ISIMS Goals," 14 December 2004.

federal technology grants.<sup>24</sup> Of 24 awards made after March 2005, the department awarded 8 grants totaling \$520,000 to districts that had proposed projects to improve their ability to participate in ISIMS.

These calculations do not include funds spent directly by school districts to prepare for or participate in ISIMS. One school district we visited estimated personnel costs alone for participation in ISIMS were \$250,000. These expenditures have not been tracked by either the department or the foundation. We asked school and district staff about the impact ISIMS had on their school or district budgets. Nearly 42 percent of respondents in ISIMS participating districts indicated ISIMS had a negative budget impact, while nearly 25 percent indicated ISIMS had a positive impact on their budget.

Because the Albertson Foundation has not provided documentation to confirm its expenditures for the project, we were not able to confirm the foundation's published figures. However, data reported to the US Internal Revenue Service indicate, as shown in exhibit 2.8, the foundation expended approximately \$23 million for ISIMS-related charitable activities and consultants between calendar years 2001 and 2004.

<sup>24</sup> S. 1432, 57th Leg., 2<sup>nd</sup> Sess. (Idaho 2004) §6.

**Exhibit 2.8: JA and Kathryn Albertson Foundation Expenditures for ISIMS-Related Activities, Calendar Years 2001–2004**

<u>Activities</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>Total</u>
Charitable	\$3,500,560	\$11,478	\$138,050	\$11,100,107	\$14,750,195
Major Consulting	n/a	259,165	1,386,142	6,535,297	8,180,604
Total	\$3,500,560	\$270,643	\$1,524,192	\$17,635,404	\$22,930,799

Source: Office of Performance Evaluations' analysis of data reported to the US Internal Revenue Service, Forms 990-PF *Return of Private Foundation*, 2001–2004 (Philanthropic Research, Inc., [www.guidestar.org](http://www.guidestar.org)).

## **Chapter 3**

# **After ISIMS: Impacts and Current Efforts**

*The Idaho Student Information Management System (ISIMS) project, and its termination in December 2004, had both positive and negative impacts on the State of Idaho. Our survey indicates experience with ISIMS may have increased an awareness of the need for some elements of standardized data collection. In addition, positive impacts associated with ISIMS include an understanding of technology issues and an awareness of technological limitations and the impact of those limitations on the state's ability to meet technology needs. Negative impacts included poor morale, both during and after the project, as well as reservations about future public-private partnerships.*

*The ISIMS project also resulted in numerous tangible assets for the state, including network reviews of school districts that outlined their local configurations, and ISIMS-related servers and other hardware. The Department of Education also acquired a partially-completed data warehouse, although it is of limited functionality.*

*This chapter provides an overview of the state's current incremental approach to student information management through the development of a data dictionary and a unique student identifier.*

### **ISIMS Had Both Positive and Negative Impacts**

To understand Idaho's ability to move forward from ISIMS, we looked at both the positive and negative impacts of ISIMS. Our survey indicates experience with ISIMS may have increased an awareness of the need for some elements of standardized data collection. In addition, impacts associated with ISIMS included understanding of technology issues and awareness of technological limitations and the effect of those limitations on the state's ability to meet technology needs. Additionally, we examined the relationship between the ISIMS project and district morale and legislators' concerns regarding contractor control and oversight in future public-private partnerships.

### ***Recognition of the Need for Standardized Data Collection***

In our survey of superintendents, principals, and technology coordinators, over 83 percent of respondents in ISIMS schools and districts (and nearly 66 percent of respondents in non-ISIMS schools and districts) indicated that Idaho needs a statewide system for student information management. When asked to rate the need for specific elements of student information management, the majority of respondents indicated their school or district would immediately benefit from the elements shown in exhibits 3.1 and 3.2. Survey respondents who had participated in ISIMS implementation were more likely than non-participants to recognize the need for better reporting to the department, a data dictionary, a unique student identifier, and a standards-based grade book, as shown in exhibit 3.2.

After the ISIMS project ended, the Department of Education moved forward with incremental efforts to standardize student data collection and management. Although the department is committed to creating unifying elements within K–12 education, the termination of the ISIMS project brought to light other issues that may limit the feasibility and overall impact of current efforts. These issues are discussed in chapters 4 and 5.

#### **Exhibit 3.1: All School and District Staff Opinions on Elements that Would Benefit Schools/Districts in the Immediate Future**

	Percent of Respondents Who Agree or Strongly Agree <sup>a</sup>
In the immediate future, my school/district would benefit from:	
Improved ability to analyze achievement results	82.6%
Tools to manage curriculum	75.7
Improved ability to provide information to parents	75.6
Improved ability to share information (e.g., transcripts) with other schools/districts	75.5
Improved connectivity (e.g., bandwidth)	71.4

<sup>a</sup> There were no statistically significant differences between responses of school and district staff who did or did not participate in ISIMS.

Source: Office of Performance Evaluations' survey of public school and district staff (superintendents, principals, administrators, and technology coordinators), May 2006.



### Exhibit 3.2: Differences between ISIMS and Non-ISIMS School and District Staff Opinions on Elements that Would Benefit Schools/Districts in the Immediate Future

In the immediate future, my school/district would benefit from:	Participated in ISIMS?	Percent of Respondents Who Agree or Strongly Agree
Improved ability to report to the Department of Education	Yes No	76.9% 62.4
A data dictionary (common data elements) used statewide	Yes No	87.2 70.1
A unique student identifier used statewide	Yes No	82.7 68.6
A standards-based gradebook	Yes No	72.4 64.3

Note: This exhibit shows only those survey items on which differences between school and district staff who did or did not participate in ISIMS were statistically significant.

Source: Office of Performance Evaluations' survey of public school and district staff (superintendents, principals, administrators, and technology coordinators), May 2006.

### ***Understanding of Technology Issues, Capabilities and Limitations***

According to school and district staff, the ISIMS project gave staff an increased overall understanding of technology issues. In January 2005, a district superintendent from southern Idaho testified to the Joint Finance-Appropriations Committee that participation in ISIMS added to the “knowledgebase” of his staff and highlighted the value and need for technology staff in schools. Additionally, 31 percent of survey respondents reported that staff in their school or district gained a better awareness of technology issues through their preparations for ISIMS.

ISIMS also highlighted districts’ technology capabilities and limitations. At the direction of the foundation, ISIMS contractors conducted on-site inspections of district infrastructures in 2004. These assessments revealed technology was not always optimal to support ISIMS, some networks were not properly configured, equipment and information was not always properly or securely stored, and staff would benefit from additional technical resources and additional professional development related to networks.<sup>1</sup>

<sup>1</sup> Former ISIMS staff reported completing on-site network reports in 112 of 114 districts.

In interviews with us, school and district staff expressed frustration with a lack of professional staff dedicated to technology support within schools or districts. These staff told us that teachers sometimes manage a school's network in addition to their regular classroom duties, regardless of qualifications, due to a lack of resources. In some instances, students themselves handled a district's technology issues. These approaches may limit a district's ability to deal with technological challenges or adapt quickly to advancements. Nearly 46 percent of school and district staff reported that preparing for ISIMS had a negative impact on their ability to meet other technology needs, compared to just over 25 percent who said it had a positive impact.

### ***Impact on Morale and Credibility***

Both the ISIMS project and its eventual termination had a negative impact on attitudes at the school, district, and state level. Nearly 62 percent of survey respondents reported that preparing for or piloting ISIMS had a negative impact on morale in their school or district.

Because some district staff were not aware the ISIMS project had been terminated until it was announced publicly, they were still using and training to use ISIMS. A superintendent from northern Idaho whose district was a participant reported that he learned of the project's termination by reading about it, rather than hearing it directly from the foundation or ISIMS management.

Not only were some school and district staff surprised at the termination of the project, some former ISIMS staff reported having difficulties with ISIMS' termination. One respondent wrote:

I have worked over 15 years in large system development for state and local governments and never before experienced a complete failure of a project. It's been a difficult time for me personally to accept.

District staff directly involved with ISIMS told us they were still concerned about the impact the project had on their credibility within districts. Department leadership also acknowledged the department must work to reestablish credibility with the districts.

As a result of their experience with the ISIMS project, school and district staff, the department, and legislators have expressed reservations about future initiatives. Several district staff we spoke with said they would not volunteer to participate in future student information management systems unless those systems were already operational in other districts. A department official told us the department has learned not to allow a private entity to manage future statewide projects.

At a Board of Examiners meeting in June 2005 to discuss closure of the ISIMS project, an official with the Governor's office noted that allowing contractors to have authority over state employees could hinder future relationships with the private sector. We found that members of the Legislature may also have concerns regarding the roles of contractors in partnerships with private organizations and the impact those roles have on communication and control.

### ***Existing Infrastructure***

Department staff and ISIMS contractors who conducted inspections of district networks identified poorly configured local area networks (LAN) and the lack of a statewide wide area network (WAN) as major challenges in establishing and maintaining connectivity with some districts (see exhibit 3.3). These infrastructure issues may still exist and will have an impact on any future statewide efforts to manage student information.

#### **Local Area Networks**

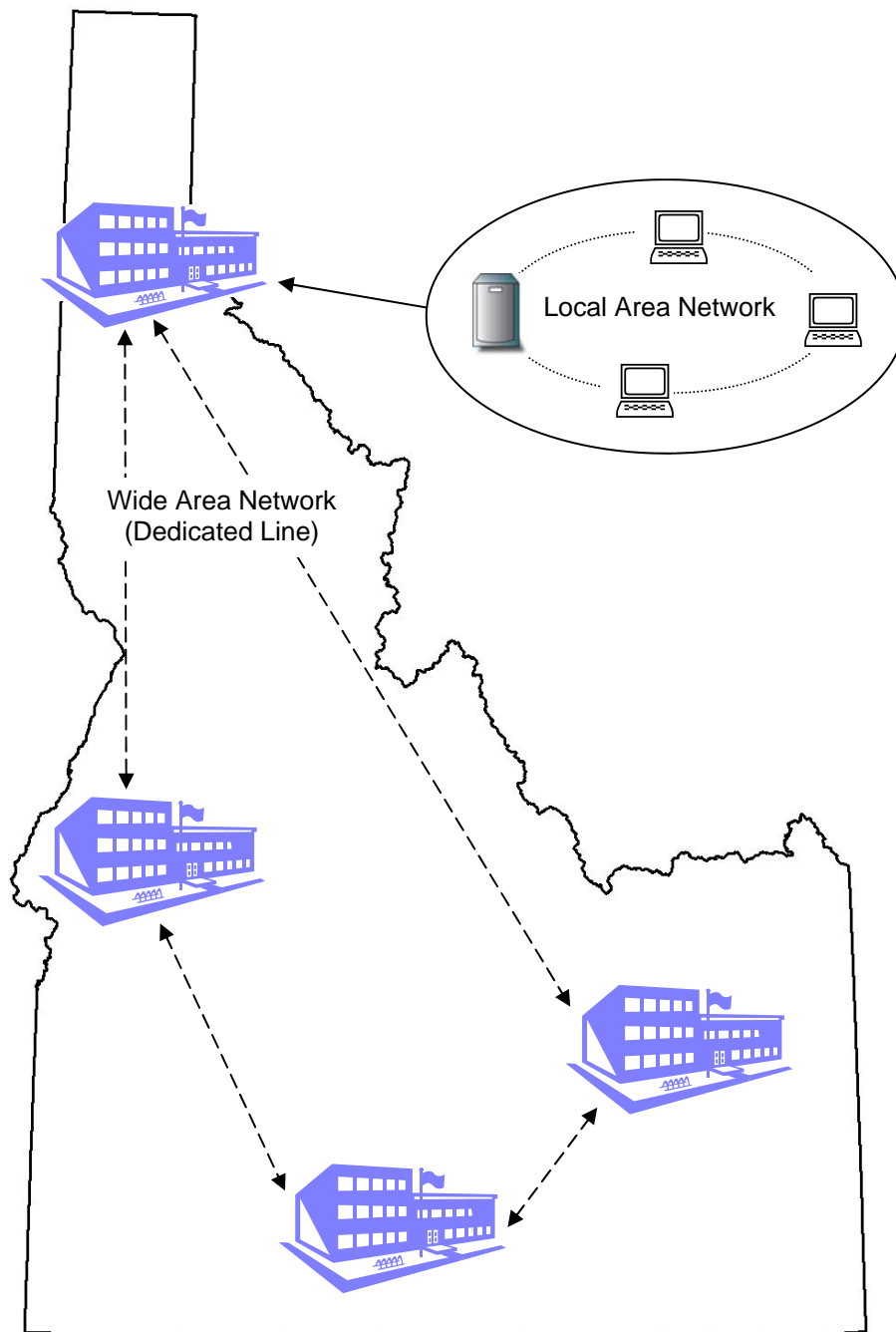
In our interviews, ISIMS contractors, department staff, and district staff all stressed the importance of evaluating the quality of LANs when making decisions about a statewide system for student information management. Because school districts have jurisdiction over design of their LANs, districts make their own decisions about network configurations. ISIMS contractors reported that due to local control and the lack of statewide support or standard training, LANs are not configured in standard ways. This lack of standardization can lead to incompatibilities between local and state systems.

#### **Wide Area Network**

As discussed in chapter 2, a study conducted in 2002 by foundation contractors identified the lack of infrastructure as one of ISIMS' greatest technical challenges and noted that implementation of a new system should address any inequities. In our survey of former ISIMS staff, several respondents described infrastructure (LAN-WAN) challenges as one of the main reasons the ISIMS project was not successful. ISIMS contractors who conducted on-site inspections of district networks in 2004 listed the lack of a statewide WAN as a major risk to ISIMS' success. The Idaho Council for Technology in Learning also identified the lack of a statewide WAN as a continuing barrier to achieving their vision in a March 2006 strategic planning meeting.

Districts must rely on the varied quality of internet services from private service providers without the development of a dedicated statewide WAN. As shown in exhibit 3.4, in fiscal year 2006, Idaho school districts were receiving internet services from over 40 different providers. Twelve districts are currently relying on more than one provider *within* their district. Even those districts with well-designed local area networks may have difficulty sending or receiving secure information outside of their district under this current configuration.

### Exhibit 3.3: Illustration of How a School/District Local Area Network Could Connect with a State Wide Area Network

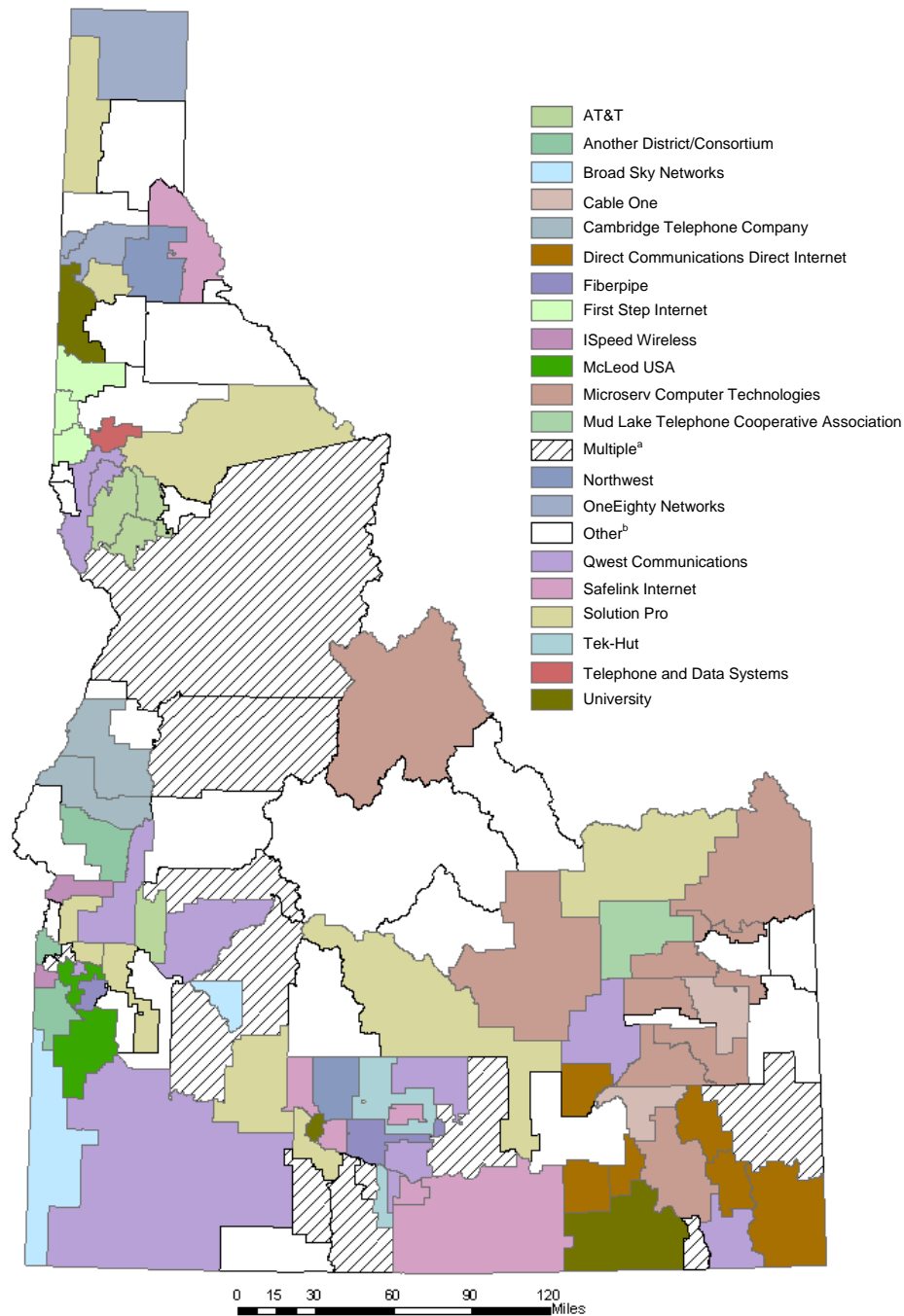


**Local Area Network (LAN)** is used to transport information within a limited space, such as between workstations within a building.

**Wide Area Network (WAN)** links LANs together and facilitates the transfer of information between LANs. A WAN may connect LANs within a single district, or across multiple geographic regions, states, or countries. This exhibit illustrates a statewide WAN that connects districts.

Source: Office of Performance Evaluations.

### Exhibit 3.4: Internet Service Providers for Idaho School Districts, Fiscal Year 2006



Note: Five districts are represented using fiscal year 2005 data because fiscal year 2006 data was not available at the time of this analysis.

<sup>a</sup> "Multiple" includes 12 districts that use more than one service provider within their district.

<sup>b</sup> "Other" includes 24 districts that use a service provider not used by any other district in the state.

Source: Department of Administration, Idaho Geospatial Information Service Center (Projection: Idaho Transverse Mercator; Datum: NAD83), and the Office of Performance Evaluations' analysis of information from the Idaho Council for Technology in Learning.

In testimony to the House Education Committee in January 2005, a foundation official specifically identified the lack of a “statewide internet service” as one of the lessons learned from the ISIMS project.<sup>2</sup> Foundation officials told us they would not have attempted the project had they known the extent of the infrastructure problems within the state. This hindsight can be directly attributed to the absence of a thorough infrastructure review until spring 2004, after ISIMS was already underway.

### **Network Assessments**

As previously mentioned, ISIMS contractors conducted on-site network analyses in nearly all of Idaho’s 114 school districts in 2004. These assessments provided information to the districts that could assist them in understanding the capacity of their networks relative to the requirements of ISIMS. However, as discussed in chapter 2, the foundation’s financial commitment for the development of the system did not include support for costs at the district level. As a result, ISIMS contractors conducting the analysis were not authorized to help districts implement their recommendations. Districts became aware of suggested changes or improvement to their local networks, but they may not have had the technical expertise or financial resources to make those changes.

Both former ISIMS contractors and department staff told us that the department lacks the resources to adequately follow-up on the network analyses. The department does not have concrete data to determine how, or if, districts were able to implement changes based on the findings.<sup>3</sup> Department staff recognize that accurate information regarding districts’ infrastructures is an important part of decision making, noting that reviews should be completed every five years and would require a team of several people to visit each district.

### ***Remaining Hardware and Software***

In January 2005, a department official told the Joint Finance-Appropriations Committee and the House Education Committee that the department had purchased the remaining ISIMS-related hardware and servers from the foundation for one dollar. The department also acquired a partially-completed data warehouse and eight software licenses. In the 2005 ISIMS termination grant agreement between the foundation and the department, the foundation agreed to release its interest in the data warehouse to the department.

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<sup>2</sup> Idaho Legislature, House Education Committee, January 31, 2005.

<sup>3</sup> The Idaho Council for Technology in Learning collects technology inventory information from districts. These reports do not identify whether technology purchases were a result of the 2004 ISIMS network assessments.

However, should the department decide to use any of the equipment (hardware or software) purchased from the foundation, the foundation reserves the right to access information managed by or contained on that equipment. The department's agreement with the foundation specifies that

...to the extent that any of the assets of the data operations center and/or the data warehouse are used in the future for the education system in the State of Idaho, the Foundation shall... have access to information retained by the data operations center and/or the data warehouse so that the Foundation may analyze the progress and results of the educational initiatives sponsored or contemplated by the Foundation in an effort to improve education in the State of Idaho in the future.<sup>4</sup>

The foundation's interest in continued access to data highlights the importance of clearly defining roles and responsibilities of all stakeholders, including their motives and objectives, as discussed in chapter 4.

### Hardware

Although the department was initially confident it would be able to use all of the remaining servers to run the data warehouse software application, the department decided to shut down and sell most of the servers in September 2005.<sup>5</sup> A department official told us in June 2006 that the department plans to use sale proceeds to support the installation and maintenance of remaining equipment.

### Data Warehouse Software

In 2004, the foundation and the department informally agreed that the department would contribute federal funds towards the data warehouse contracts. This agreement resulted in a state investment of approximately \$1 million from federal funds.

Despite the State Superintendent's statements to the Legislature in January 2005, the data warehouse eventually delivered to the department was not the product the department anticipated it would be, in part because it was designed to run on the *eSIS* software that was no longer in use. In the Superintendent's proposal for a scaled-down version of ISIMS in spring 2005, the department acknowledged that the data elements—the building blocks for a data warehouse and part of the initial contract—had not been finalized before the termination of the ISIMS

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<sup>4</sup> Research Agreement, signed by the State Board of Education, the State Department of Education, and the JA and Kathryn Albertson Foundation, October 10, 2002; Idaho Student Information Management System (ISIMS) Termination Project Grant Agreement, signed by the State Department of Education and the JA and Kathryn Albertson Foundation, March 15, 2005.

<sup>5</sup> The data warehouse (created by CRI Advantage Inc.), along with a data dictionary, was specifically designed to run via the *eSIS* application on Sun Microsystems servers. After determining the data warehouse product delivered by the vendor did not meet the department's current requirements, the department had no further use for the Sun Microsystems servers. Those servers were sold for a total price of \$217,926.

project. Both the department and the vendor agree that the data warehouse delivered by the vendor did not meet the initial contract specifications and did not include state and federal reporting formats.<sup>6</sup> Also, should any district use the remaining analytics software (a component of the original data warehouse), they would be required to pay the vendor a maintenance fee.<sup>7</sup>

### Student Information Management Software

As discussed in chapter 2, in 2005, the foundation provided participating districts with off-the-shelf data management software once ISIMS ended. Information provided by the department indicated that at the end of fiscal year 2005, Idaho districts were using 16 different software packages. A department official told us that nearly half of districts are now using one vendor, *PowerSchool*, for their student information management software. Information provided by the department for fiscal year 2006 indicates slightly less consolidation, with approximately 39 percent of districts now relying on *PowerSchool*, and 18 districts relying on multiple packages within their district or no package at all. However, according to this data, between fiscal years 2005 and 2006, districts relying on a single vendor increased by almost 30 percent, including a nearly 22 percent increase in the use of *PowerSchool*. As shown in exhibit 3.5, the department and districts may have made some progress since ISIMS to standardize software throughout the state.

## Current Efforts Are Incremental

While no district is currently using an ISIMS application, the department's current efforts are a culmination of their goals and objectives prior to the ISIMS project, the assets gained from ISIMS, and their present incremental approach to standardizing how student information is managed. These efforts may eventually serve as the foundation for a data warehouse.

In 2005, the department created an Assessment and Data Analysis Team, comprised of department staff from various bureaus. The team also includes five separate action groups, tasked with different areas of student information management. According to their charter, the mission of the team is to "provide leadership, technical assistance, resources, oversight and guidance on policies and regulations of data used by the department, to ensure utility, objectivity, integrity of data collection, storage, analysis and reporting." Department staff told us that the team was originally given a one-year plan and is currently revising their charter.

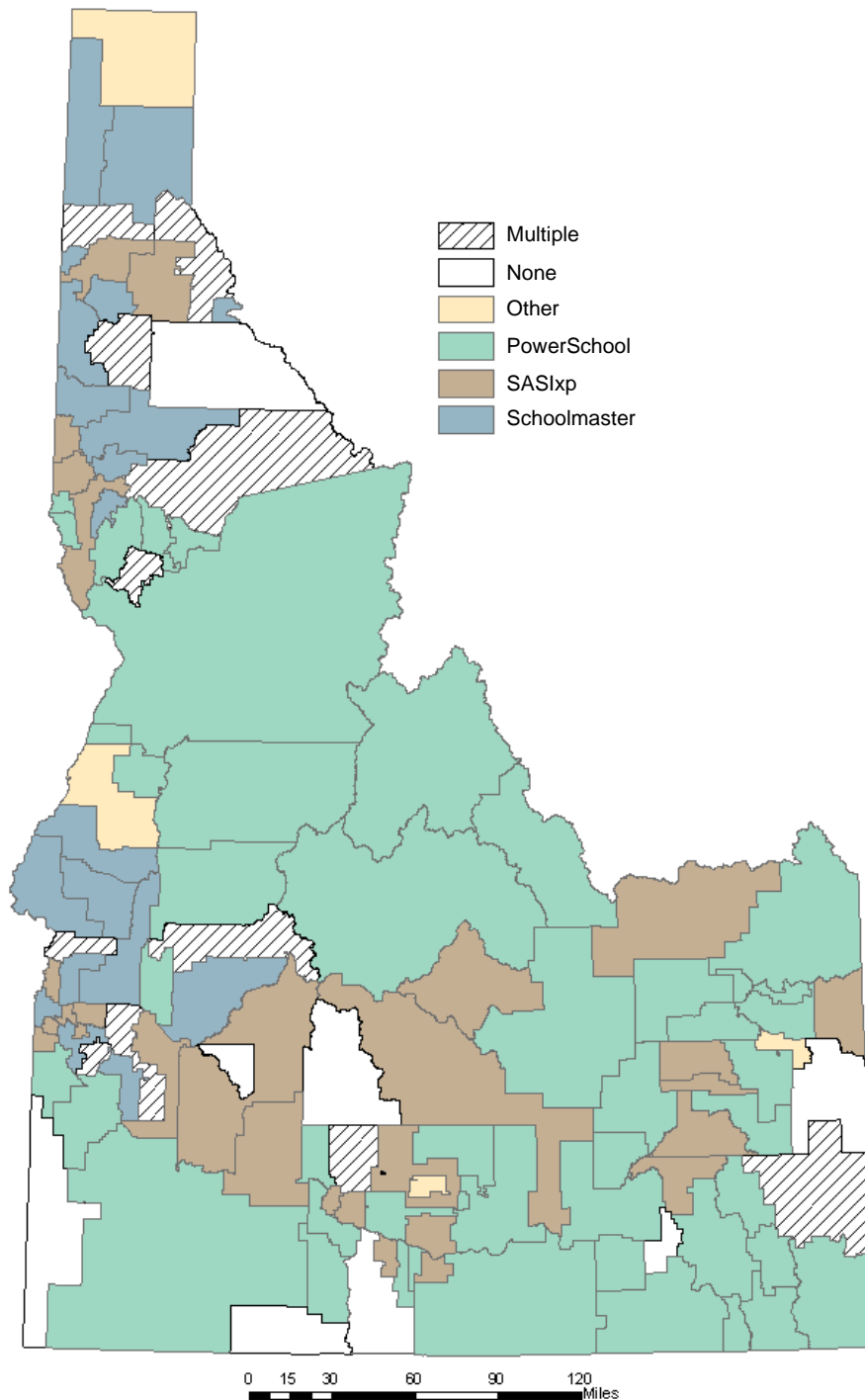
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<sup>6</sup> The vendor and the department agree that the vendor has been paid for all work completed.

<sup>7</sup> The analytics software contract determined that maintenance fees would be assigned at \$1.30 per student for the initial stages of ISIMS, followed by an annual maintenance fee structure of \$325,000.



### Exhibit 3.5: Student Information Management Software in Use in Idaho Schools, Fiscal Year 2006



Note: Four districts are represented using FY2005 data, as FY2006 data was not available at the time of this analysis.

Source: Department of Administration, Idaho Geospatial Information Service Center (Projection: Idaho Transverse Mercator; Datum: NAD83), and the Office of Performance Evaluations' analysis of information from the Idaho Council for Technology in Learning.

The department has recently added two full-time positions from a \$165,000 supplemental approved by the Legislature in 2006. One employee will specifically support the efforts of the Assessment and Data Analysis Team, and another will work with the Bureau of Technology Services as a programmer. Although the department does not have a dedicated network specialist, department management believe these new staff will be sufficient to deal with any problems that may arise during the implementation of current initiatives.<sup>8</sup>

### ***Data Warehouse***

The department has not made tangible progress towards establishing a centralized data warehouse since the ISIMS project ended in 2005. The department continues to collect student information from districts and maintains that information in separate databases (silos) throughout the department. Department staff differ on whether a consolidated statewide data warehouse, which would house and analyze student information for state and district use, is in their immediate plans, and staff are unsure about the state's overall direction for a data warehouse.

### ***Data Dictionary***

The purpose of the data dictionary is to standardize how information is collected, transmitted, and stored. The department's goal is to make the dictionary as concise and manageable as possible and to match national standards.<sup>9</sup> Because most of the work performed on the data dictionary was completed during the ISIMS project using the ISIMS student information management software as its framework, the existing data dictionary has limitations. The department continues to work towards a uniform data dictionary, although progress has been slowed since the termination of the ISIMS project.

The department initially planned to expand the existing data dictionary with a roll-out date of May 1, 2006. However, department staff later told us that the process of finalizing the data elements was much greater than anticipated. The department is currently considering a redesign of the entire data dictionary to better reflect state and federal reporting requirements, with a roll-out date of December 2006.<sup>10</sup>

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<sup>8</sup> The department retained one former ISIMS staff member who is now employed by the Idaho Council for Technology in Learning as a district coordinator. The council recently voted to change this job title from Network/Telecommunication Specialist to more accurately reflect the current duties of this position.

<sup>9</sup> See National Center for Education Statistics, *Data Handbooks*, <http://nces.ed.gov/programs/handbook>.

<sup>10</sup> There is presently no common course code system in place in Idaho, and department staff suggested implementation of such a system is several years away. Bureau of Technology Services staff working on the data dictionary, and staff in the bureaus of Educational Improvement and School Support Services assigned to work with the state's course codes, disagreed about whether course codes would be part of the data dictionary.

## ***Unique Student Identifier***

The purpose of a unique student identifier, which anonymously identifies an individual student, is to allow districts to transfer student records from district to district and to allow the state to use aggregate information to monitor the effectiveness of the education system over time. The May 2003 agreement between the State of Idaho and the foundation specified that the department would be responsible for the development of data elements, course codes, and a unique student identifier for ISIMS, with a completion date of June 2003. These responsibilities were also reflected in policies adopted by the Board of Education in 2003.<sup>11</sup>

ISIMS did employ a unique student identifier, but this identifier was specific to the software and is no longer available for statewide use. Department staff differed on the best approach for moving forward with a unique student identifier after ISIMS. Bureau of Technology Services staff told us they felt the use of an existing software package would be in the department's best interest, while management told us they preferred to contract for Idaho-specific software to generate unique student identifiers.

Despite those differences, the department entered into a contract in January 2006 that specifies

Independent Contractor will create program specifications that can successfully obtain district data that will assign a unique identification number to each student, and allow the student data to be sent back to school districts.

Department staff confirmed in June 2006 that the pilot for the identifier had not started (the contract also specifies a pilot project was scheduled to begin in April). However, they maintain that the unique student identifier system will be implemented in all Idaho school districts beginning in August 2006, for the current school year.

The new identifier is eight characters long. Some districts are currently using unique student identifiers that vary in length and character. Department staff expect the new identifier to be compatible with the various student information management software packages throughout the state. However, the department staff told us in June 2006 that the department did not plan to inform most districts of the new system until the pilots were complete.<sup>12</sup> Because many school and district staff are not yet fully informed about the characteristics of the identifier or details surrounding installation, they are unable to plan for changes to their current systems or staffing implementation of the new identifier system.

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<sup>11</sup> State Board of Education, Governing Policies and Procedures IV.B(10): *Idaho Student Information Management System* (May 2003).

<sup>12</sup> Department staff presented the unique student identifier program, along with the department's data dictionary project, at the August 2006 meeting of school district superintendents.

As of July 2006, the department had no written plan for the implementation of the unique student identifier system statewide during the 2006–2007 school year. As a result, we were not able to determine what contingency options are in place for system compatibility, staffing, or budgeting.

### ***Comparison of Neighboring States***

To provide perspective on Idaho's current efforts, we looked at how neighboring states are approaching student information management. As shown in exhibit 3.6, we found most of our neighboring states have a centralized data warehouse, which requires a unique student identifier and a data dictionary. Additionally, neighboring states often own a statewide wide area network.

**Exhibit 3.6: Features of Student Information Management Systems in Place in Idaho and Neighboring States**

	<u>Idaho</u>	<u>Montana</u>	<u>Nevada</u>	<u>Oregon</u>	<u>Utah</u>	<u>Washington</u>	<u>Wyoming</u>
One statewide software package	No	No	No	No	No <sup>a</sup>	No	No
Single, centralized data warehouse	No	No	Yes	No	Yes	Yes	Yes
Statewide unique student identifier	No	No	Yes	Yes	Yes	Yes	Yes
Data dictionary	No <sup>b</sup>	No	Yes	Yes	Yes	Yes	Yes
Data dictionary mandatory	No	n/a	Yes	Yes	Yes	Yes	Yes
Statewide network (WAN)	No	Yes <sup>c</sup>	No	No	Yes	Yes	Yes
Student information appropriation in FY2006 (approximate)	\$165,000 <sup>d</sup>	\$1,413,200 <sup>e</sup>	\$200,000 <sup>f</sup>	\$450,000 <sup>e</sup>	\$1,034,700	\$689,000 <sup>e</sup>	\$65,000 <sup>g</sup>

<sup>a</sup> Although Utah maintains a software package it offers statewide, school districts are not required to use it.

<sup>b</sup> The Idaho Department of Education is currently revising its data dictionary.

<sup>c</sup> Not all schools are able to access this network.

<sup>d</sup> Supplemental funding for two FTEs.

<sup>e</sup> Annual appropriation in fiscal year 2006 and fiscal year 2007 (two-year budget cycle).

<sup>f</sup> After \$850,000 in prior development funding.

<sup>g</sup> Estimated annual funding for one FTE in a comparable field of work.

Source: Office of Performance Evaluations' analysis of information from the Idaho Department of Education; Montana, Nevada, Oregon, Utah, Washington, and Wyoming.

## Chapter 4

# ISIMS Lessons: Stakeholders

*This chapter considers the roles stakeholders play in implementing statewide initiatives that require state and local cooperation and compromise, and discusses the dynamics of adequate stakeholder involvement in future state-led educational technology projects. The ISIMS project reflected a lack of understanding regarding district needs and resources, and did not fully benefit from the technical expertise of state and local staff. In addition, the roles of all ISIMS stakeholders were not clearly defined, and responsibilities, such as contract oversight, were blurred. Currently, state and local roles and responsibilities for implementing new initiatives have yet to be clearly defined. As a result, the Board of Education and the Department of Education have duplicated their efforts, and school and district staff have not been fully informed about their role in new initiatives.*

### District Differences Should Be Considered When Developing Statewide Systems

Idaho Code establishes school districts as local, board-governed corporate and political entities.<sup>1</sup> Statewide, 114 school districts and a growing number of charter schools operate independently and vary greatly. Idaho school districts cover geographic areas that range from 8,128 square miles in Grangeville to 22 square miles in Caldwell; enrollments range between 271 students per square mile in the Caldwell School District, to only 1 student for every 164 square miles in the Three Creek Elementary School District.<sup>2</sup>

State, district, and former ISIMS project staff we spoke with and surveyed stressed the importance of considering the independent traditions of K–12 public education when implementing statewide initiatives. The following survey excerpts are examples of their opinions:

Forcing all districts to use the same package is a big mistake.  
One size does not fit all. One style does not work for all.

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<sup>1</sup> IDAHO CODE §§ 33-301, –501.

<sup>2</sup> Based on fall enrollment in school year 2005–2006, and information from the Department of Administration, Idaho Geospatial Information Service Center.

We have devised our own system appropriate for our small setting.

Instead of generic visions, the state needs to understand the different school districts.

If we just look at simple answers to complex issues, we will make the same mistakes again.

The success of future statewide initiatives will depend on the degree to which the willingness, needs, and roles of school districts and other key stakeholders are considered. In 2003, the Virginia Joint Legislative Audit and Review Commission found that development of statewide systems can be challenged by a “lack of statewide technology standards, individual agency autonomy, [and a] lack of coordination between central and line agencies.”<sup>3</sup> When moving forward, with consideration to the independent culture of public education in Idaho, the Board of Education and the Department of Education should cooperatively ensure that roles and responsibilities are clearly defined and agreed upon.

## **The State Should Ensure End Users Are Involved**

The state can ensure success of future projects by allowing experienced school and district staff to help determine whether a technology project is needed and whether its design meets existing needs. According to the international Organization for Economic Cooperation and Development

Close consultation with client groups and representatives helps build ownership and commitment. Extensive user participation in systems development and testing is essential for a viable end product.<sup>4</sup>

In a 2004 report on a cancelled government information technology project, the Northern Ireland Audit Office noted that “end users must be identified before the project commences so that their needs are taken into account fully during design and development.”<sup>5</sup> The US Government Accountability Office (GAO) also has recommended that project strategic plans be anchored to the needs of end users

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<sup>3</sup> Virginia Joint Legislative Audit and Review Commission, *Review of Information Technology Systems Development* (February 2003), vi.

<sup>4</sup> Organization for Economic Co-operation and Development, *The Hidden Threat to E-Government: Avoiding Large Government IT Failures*, Public Management Policy Brief (March 2001), 5.

<sup>5</sup> Northern Ireland Audit Office, Report by the Comptroller and Auditor General, *Civil Service Human Resource Management System: Cancellation of the Payroll Project* (November 2004), 80.

(state and local staff) to ensure the project’s mission is achieved.<sup>6</sup> To anchor plans to actual needs, project managers must have in place a clear method for ensuring appropriate interaction with experienced staff at the state, district, and school level. For example, the Idaho Department of Water Resources involved the end users of its Database Migration Project by establishing a Risk Management Team to regularly inform decision makers of risks associated with the project. Former staff of the project described this team as an “outrigger” that provided “balance.”

### ***Understanding District Needs and Resources***

School, district, and former ISIMS staff were divided about how well the ISIMS project involved end users, as shown in exhibit 4.1.

School and district staff who had participated in ISIMS were nearly evenly divided about whether their views were considered during ISIMS planning and implementation. However, school and district staff who had not participated in ISIMS were more likely to rate the project poorly on this point. This variation in responses suggests school and district staff who had not participated in the early piloting and implementation phases of ISIMS may not have been given sufficient or equal opportunity to influence the design of the system.

<sup>6</sup> Government Accountability Office, *Government Reform: Legislation Would Strengthen Federal Management of Information and Technology*, GAO Testimony (July 1995), 12–13.

#### **Exhibit 4.1: Survey Responses on the Quality of State-Level Consideration of Stakeholders in the ISIMS Project**

	<u>Former ISIMS Staff</u>	<u>School and District Staff</u>
Effective user input/involvement <sup>a</sup>	<b>+</b>	<b>–</b>
Clear statement of requirements and specifications (thorough needs assessment) <sup>b</sup>	<b>=</b>	<b>–</b>
Use of standard software <sup>c</sup>	<b>+</b>	<b>–</b>

Notes: **+** indicates more respondents were positive than negative

**–** indicates more respondents were negative than positive

**=** indicates respondents were equally divided

<sup>a</sup> “Consideration of user (school/district) views” in our school/district survey.

<sup>b</sup> “Consideration of school/district technological capacity” in our school/district survey.

<sup>c</sup> “Consideration of software already in use by schools/districts” in our school/district survey.

Source: Office of Performance Evaluations’ surveys of former ISIMS management, staff, contactors, and vendors; public school and district staff (superintendents, principals, administrators, and technology coordinators), May 2006.

**Survey responses about the quality of user input/involvement in state-level ISIMS planning and implementation, by percent of respondents**

	School/District ISIMS Participants	School/District ISIMS Non-Participants	Former ISIMS Staff
Very good	5.4%	6.4%	10.5%
Good	29.0	13.8	31.6
Neither good nor poor	29.0	22.0	26.3
Poor	23.7	33.9	18.4
Very poor	12.9	23.9	13.2
	34.4%	20.2%	42.1%
	36.6%	57.8%	31.6%

### Understanding District Needs

Some district staff have commended the early efforts of the ISIMS project when considering stakeholder views in the design of the ISIMS vision. However, the project did not thoroughly assess districts' practical needs or resources (e.g., networks) as a prerequisite to designing the system or selecting vendors. A school/district survey respondent observed

Although the vision was positive, the implementation focused on services that most districts already possessed, rather than services that were needed but either unavailable or too expensive.

Several school and district staff we interviewed noted the unfamiliar Canadian format and terminology of the ISIMS student information management component. Former ISIMS managers told us the project did not initially determine how the range of district business practices, such as ways of arranging class schedules or collecting attendance data, would affect the design and standardization of ISIMS. As a result, ISIMS management was unprepared to address the frustration experienced by school and district staff as they adjusted to a new system.

### Understanding District Resources

The groundwork for realistic project goals is a comprehensive understanding of school district resources, as well as needs. Idaho Legislative Audits recommends "a thorough review of existing systems" at the beginning of a project.<sup>7</sup> We asked school and district staff if local technological capacity (e.g., hardware and network capacity) was considered during the design and implementation of the ISIMS project. Respondents in ISIMS-participating districts were divided; in nonparticipating districts, a majority of respondents indicated negative views, with over 24 percent indicating strongly negative opinions. These responses may reflect the lack of a thorough review of district technological capacities until spring 2004.

<sup>7</sup> Idaho Legislative Services Office, *Key Features to Avoiding the Risk of IT System Challenges and Failures in the State of Idaho* (2002).



Similarly, less than 9 percent of former ISIMS staff who responded to our survey gave a positive rating to the project's efforts to identify and manage risks. Compounding this issue, former ISIMS staff told us that ISIMS management continued the project's course, despite warnings from staff about risks, including inadequate information technology networks.

### ***Benefiting from Technical Expertise***

The Virginia Joint Legislative Audit and Review Commission noted that access to sufficient, technically-competent project staff and end users is key to ensuring technology initiatives are successfully implemented and intelligently maintained.<sup>8</sup>

#### **Considering the Views of Knowledgeable Technicians**

A number of state and district staff we interviewed agreed that ISIMS project staffing tended more towards management consultants than hands-on technicians. In addition, some former staff indicated that advice from technical staff was disregarded by management. Other former ISIMS and district staff also indicated that project managers who had business-oriented rather than education-oriented mindsets did not understand district concerns.

Former ISIMS managers, vendors, and staff who responded to our survey were critical of the expertise of ISIMS management; nearly half (49 percent) rated *project managers'* expertise poorly. In contrast, these respondents indicated no negative opinions about ISIMS *project staff*, with over 63 percent indicating ISIMS was supported by competent staff. These opposite opinions seem to support comments from several former staff and managers about the disconnection between ISIMS management and staff over technical and planning issues.

#### **Understanding Existing Resources**

Some district staff we spoke with and surveyed noted limited access to staff with sufficient technical expertise at the local level. Former ISIMS project staff observed that a shortage of qualified district personnel was a risk factor during implementation of ISIMS. Although workstation specifications and network direction were available from the ISIMS project office, some district staff we spoke with indicated that districts often did not have the technical expertise or time to interpret or apply those specifications.<sup>9</sup>

However, our survey of school and district staff showed that confidence in local abilities to address technology issues is very high. District staff were most confident about their ability to maintain network, hardware and software

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<sup>8</sup> Virginia Joint Legislative Audit and Review Commission, *Review of Information Technology Systems Development* (February 2003), iv, 56.

<sup>9</sup> The Legislature appropriated \$5 million in 2004 to be used by all districts for one-time technical improvements to prepare for ISIMS.

systems, with nearly 42 percent indicating strongly positive opinions. The gap between this degree of local confidence and skepticism expressed by others regarding local capabilities may reflect the inability of ISIMS management to consider district needs and resources in state-level planning or give adequate credence to the views of district staff. Proper consideration of the advice of technical staff at state and local levels is a central lesson of the ISIMS project.

### **Current Direction**

The Department of Education's current efforts to improve statewide student information collection would benefit from greater involvement with school and district staff. District staff we spoke with and surveyed did not have a clear idea of where the state was headed with respect to student information management, as shown in exhibit 4.2.

Without input from local staff, the department cannot benefit from local expertise or gauge with certainty how new initiatives will impact school and district staff. The department has limited the information it provides to stakeholders on its current projects, and it has intentionally minimized efforts to involve districts in the development of a unique student identifier and data dictionary. Department staff said that this delay in communication would allow the department time to finalize details. However, as of July 2006, the department had *not* finalized details about state and district responsibilities or determined the potential costs to districts of such projects. For example, department staff assume local administrative and clerical staff will have sufficient time and expertise to implement system changes associated with the unique student identifier. Best practices we researched indicate that making such assumptions without adequate local involvement could have negative implications for project success.<sup>10</sup> The International Organization of Supreme Audit Institutions has observed that insufficient understanding of user needs “due to secrecy or haste during definition and design phase” is one of the common factors contributing to failure in information technology projects.<sup>11</sup>

Furthermore, we observed a lack of consensus between staff within the department over implementation of technology projects. Some technology staff feel that unilateral decisions about the development of new projects are being made by department leaders without the benefit of staff expertise. Department management should endeavor to give proper consideration to the advice of technical staff.

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<sup>10</sup> The Standish Group International, *Extreme Chaos* (Standish Group, 2001), 4.

<sup>11</sup> International Organization of Supreme Audit Institutions, *Best Practice: Why IT Projects Fail* (2002). See also: State of Washington, Joint Legislative Audit and Review Committee, *Evaluation of Budget Process for Information Technology Projects* (February 2006), 5; California State Auditor, Bureau of State Audits, *Information Technology: Control Structures Are Only Part of Successful Governance* (February 2003), 3, 45; Frank Fish and Jeff McLaughlin, “A ‘Perfect’ Integrated Financial System? How Perspective Alters Perception,” *DataBus* (California Educational Data Processing Association, Winter 2005), 6–7, 9.

## Exhibit 4.2: School and District Staff on Idaho's Current Vision for Student Information Management

Survey question: To the best of your knowledge, which of the following approaches best describes the State of Idaho's current vision or direction for student information management?

	Percent of Respondents
<b>Centralized (e.g., ISIMS)</b>	21.5%
All districts use the same software package	
Software is hosted for all districts in a single, centralized location	
Information is maintained in the single, centralized warehouse	
<b>Regional</b>	5.2
All districts use the same software package	
Software is hosted for several geographically adjacent districts in a location central to those districts	
Each district transfers information to a single, centralized warehouse	
<b>District Option A</b>	11.0
All districts use the same software package	
Software is hosted at the district level and serves schools in that district	
Each district transfers information to a single, centralized warehouse	
<b>District Option B</b>	16.2
Each district uses different software according to choice	
Each district uses standardized data elements	
Each district transfers information to a single, centralized warehouse	
<b>District Option C</b>	30.4
Each district uses different software according to choice	
Each district uses standardized data elements	
Each district reports to the state and other districts as needed (no data warehouse)	
<b>Hybrid</b>	5.2
Larger/urban districts connect to a single, centrally-hosted software package	
Larger/urban districts' information maintained in a single, centralized warehouse	
Smaller/rural districts host their own software choice	
Smaller/rural districts transfer information to a single, centralized warehouse	
<b>Other<sup>a</sup></b>	10.5

57.6%

<sup>a</sup> Includes local or regional systems, systems that suit the needs of teachers, or responses that indicated the state has no vision for statewide student information management.

n = 191

Source: Office of Performance Evaluations' survey of public school and district staff (superintendents, principals, administrators, and technology coordinators), May 2006.

## The Board and the Department Should Clearly Define Roles and Responsibilities

According to GAO, formalized responsibilities and relationships are key to developing an effective operational model.<sup>12</sup> The state should clearly define roles and responsibilities to ensure the needs of all parties are addressed and objectives are accomplished. As discussed in chapter 2, the ISIMS vision addressed a broad range of expectations for a broad range of stakeholders. This vision increased the need to ensure that all stakeholders understood their roles and responsibilities, including the resources they would be expected to contribute to the project.<sup>13</sup>

### Public Roles

Idaho Code directed the Board of Education and local district boards to ensure that ISIMS would be used “to the full extent of its availability.”<sup>14</sup> However, state-level agreements or plans did not formally incorporate districts’ responsibility for system implementation within their districts (personnel, software, hardware, or bandwidth improvement costs and installation). A *thorough* assessment of districts’ needs and resources was not conducted or used to define the budget for development of the system.<sup>15</sup> State-level documents did not address local responsibility until 2004. In spring 2004, the foundation contracted for district network assessments, but deferred responsibility for resolving issues raised in those assessments to the state and districts.<sup>16</sup>

If the ISIMS project was not designed around the unique resources and needs of districts, districts could not be expected to effectively contribute to the project’s implementation. Similarly, not all school and district staff understood their roles and responsibilities for implementing ISIMS. Although half (nearly 51 percent) of school and district respondents who participated in ISIMS indicated they understood what would be required of their school or district, less than a third (31 percent) of respondents who had not participated in ISIMS agreed.

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<sup>12</sup> Government Accountability Office, *Information Technology: Leading Commercial Practices for Outsourcing of Services* (November 2001), 14–15.

<sup>13</sup> Treasury Board of Canada Secretariat, *An Enhanced Framework for the Management of Information Technology Projects* (May 1996), 9; George Pitagorsky, PMP; Microsoft Corporation, *Managing Projects the Right Way: Key Principles for Successful Projects* (2004), 14.

<sup>14</sup> H. 367, 57th Leg., 1st Sess. (Idaho 2003), §§1–2. Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006).

<sup>15</sup> The limitations of the district hardware and software inventory comparisons conducted by the department in early 2002 have already been discussed in chapter 2. The ISIMS project changed the design of the system in fall 2002, and expanded it in summer 2003, before conducting assessments of district networks in spring 2004.

<sup>16</sup> Idaho Legislature, Joint Senate and House Education Committees, February 4, 2004.

Slightly more than half (53 percent) of school and district respondents who participated in ISIMS indicated they had received sufficient information about ISIMS to make local technology decisions. In contrast, over 44 percent of respondents who had not participated in ISIMS indicated they had *not* been informed about changes to ISIMS when they needed to know about them. The variations between responses suggest that those not participating in the first phases of the project were not clearly identified as ISIMS stakeholders.

Some former ISIMS staff noted that state leaders—including the Legislature, Governor, and board and department officials—should be united about the direction of projects that affect multiple stakeholders. Some former ISIMS staff likewise expressed concerns that the lack of clear state and local “ownership” of ISIMS negatively affected both the project vision and statewide agreement on policy. In May 2003, the board adopted policies that reiterated the roles outlined in statute, delegated some responsibilities to the department, and assigned additional responsibilities to the department. These policies, however, were not implemented. Although required by statute, the board did not draft administrative rules to govern the system, nor did the office of the board establish a schedule to receive regular ISIMS progress reports from the department. Board staff noted they had no direct communication with the ISIMS project and received information only when problems arose.

### ***Public-Private Partnerships***

Former ISIMS project staff we spoke with expressed concern that the foundation’s interest in ISIMS was constricted by fiscal matters that did not necessarily align with the project’s long-term educational vision. However, a former chief information officer for the State of Utah has noted that waste of public funds may occur when agencies—believing “the Legislature, the press, and the public would not understand”—are pressured to continue unfeasible technology projects.<sup>17</sup> Unclear roles and responsibilities (specifically for leadership and oversight) between the state and foundation may have contributed to some disparity over the practical goals of the project (e.g., to meet different local and state needs). Our review of literature regarding successful information technology projects indicates that clear and appropriate support from executive leadership can prevent such disagreements.<sup>18</sup> We asked former ISIMS staff to rate the quality of executive support for the project; nearly 43 percent of respondents rated it poorly, and less than 23 percent answered positively.

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<sup>17</sup> Phil Windley, “Government IT Projects *Are* Different,” [blogs.zdnet.com](http://blogs.zdnet.com) (January 2005), <http://blogs.zdnet.com>; Associated Press, “Oops: Government IT Blunders,” *Wired News* (January 30, 2005), <http://www.wired.com>.

<sup>18</sup> Mike Cross, “Why government IT projects go wrong,” *Computing* (September, 11 2002).

### Clarity of Roles and Rights

The roles and responsibilities of the ISIMS project were defined in Idaho Code and in agreements signed between the Governor, the department, the board, and the foundation (exhibit 4.3). However, these documents did not fully detail the demarcation points between private, state, and local responsibilities. Specific responsibility to plan and provide for the local network capacity required to operate ISIMS was not formally defined before the project was implemented, as illustrated in the final item in the exhibit.

Statute and formal agreements were also inconsistent about responsibility for operation of the project. For example, while an agreement with the foundation assigned some day-to-day operations responsibilities to the department, the foundation retained operational control during the development of ISIMS.<sup>19</sup> Idaho Code gave the Board of Education responsibility for seeing ISIMS implemented.<sup>20</sup> However, because the foundation controlled funding for the project, in actual practice it also controlled the project's development and implementation. The foundation also retained ultimate authority to control project assets and cancel the project. As a result, project staff were unsure who was ultimately responsible for decision-making.

Although the chief of the department's Bureau of Technology Services represented the state's interests by having a formal place on the ISIMS management team, state and project staff and contractors agree that this role lacked authority. The department's lack of authority limited its effective advocacy for the state, as well as its ability to access detailed management information and influence the decisions of upper management of the foundation. Similarly, project staff and members of the stakeholders' committee were also limited in their ability to influence the direction of ISIMS or bring issues to the attention of upper management.

When asked about communication with state or foundation officials, there were no statistically significant differences between school and district staff who did or did not participate in ISIMS. While over 41 percent of respondents indicated they could bring their views to state education officials, over 42 percent of respondents did *not* feel they could raise questions and concerns with ISIMS management or officials of the foundation.

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<sup>19</sup> Idaho Student Information Management System Agreement, signed by the Governor of Idaho, the State Board of Education, the State Department of Education, and the JA and Kathryn Albertson Foundation, May 30, 2003; Addendum, signed by the State Department of Education and the JA and Kathryn Albertson Foundation, November 26, 2003.

<sup>20</sup> H. 367, 57th Leg., 1st Sess. (Idaho 2003). Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006).

### Exhibit 4.3: ISIMS Project Roles and Responsibilities Defined in Idaho Code, Board Policy, and State Agreements

Year Defined	Role or responsibility	State Department	District Board State Board	Foundation/ State Board/Staff	Legislature ISIMS	Governor	Private Schools
2001	Needs assessment	x					
2001	Implementation		x		x		
2003	System availability		x				
2003	Use of system		x	x			
2003	Control of access to data	x	x				
2003	Idaho Administrative Rules		x				
2003	Funding during building phase				x		
2003	Funding from fiscal year 2006					x	x
2003	Progress reports <sup>a</sup>	x	x				
2003	Operation of project <sup>b</sup>	x			x		
2003	Supervision, management, design, expenditures				x		
2003	Review and comment on board policies				x		
2003	Statewide unique student identifier	x	x				
2003	Statewide course code system	x	x				
2003	Data quality <sup>c</sup>	x	x				
2003	Comprehensive data dictionary	x					
2003	Security of data	x	x				
2003	Stakeholders committee member appointments				x	x	
2003	Consideration of input from stakeholders committee				x		
2003	Costs of participation (local infrastructure)						x
2004	Costs of participation (local infrastructure, using state technology grants)			x			

Note: Infrastructure, as relevant to ISIMS, refers to adequate bandwidth to every building, a modern computer for every teacher, a hardware replacement cycle, and support.

<sup>a</sup> Schedule and content of these progress reports was to be determined by the board.

<sup>b</sup> The May 2003 state-foundation agreement stated the department had responsibility for “day-to-day operations” during ISIMS development, but that the foundation reserved “management and operation” control. At such time as the project was handed over to the state, the department would take on ongoing operational responsibility.

<sup>c</sup> Board policy required the department to submit a report to the board on results of their quality control efforts.

Source: Office of Performance Evaluations’ analysis of H. 367, 57th Leg., 1st Sess. (Idaho 2003). Repealed by H. 752, 58th Leg., 2nd Sess. (Idaho 2006); Senate and House Education Committee testimony; State Board of Education (SBE) policies; Grant Agreement, signed by the State Department of Education (SDE) and the JA and Kathryn Albertson Foundation (JKAF), November 28, 2001; Research Agreement, signed by SBE, SDE, and JKAF, October 10, 2002; Idaho Student Information Management System Agreement, signed by the Governor of Idaho, SBE, SDE, and JKAF, May 30, 2003; Addendum signed by SDE and JKAF, November 26, 2003; Grant Agreement, signed by SDE and JKAF, December 18, 2004.

### Private Control over Public Interests

The unique partnership between the state and the foundation, established to implement a largely privately-funded system in all Idaho schools, allowed private management contractors to influence public education entities in Idaho. Board and department officials now acknowledge that because the department and the board allowed a private entity to control public functions and personnel, there were consequences for the state and the ISIMS project:

- The privately-contracted project managers were unable or unwilling to adjust budgets or timelines, increasing workloads and overtime for project staff. Department officials noted during a Board of Examiners meeting in June 2005 that private control over public employees created a financial obligation for the state and negatively impacted morale.
- Public funds were poorly invested in ISIMS. Without access to sufficient or accurate management information from the foundation or its contracted managers, in 2004 the department invested \$1 million of federal funds in a data warehouse that later proved not viable. More direct state oversight may have prevented this poor investment.
- The department, the board, and school districts have limited opportunities to fully learn the technical, planning, leadership and oversight, and financial accountability lessons of ISIMS because the foundation has limited the department's ability to use and distribute documentation from the ISIMS project.

These examples reinforce the importance of not only having complete and timely access to pertinent project information, but having authority to make necessary changes based on that information.

### Appropriateness of Contract Oversight

While the department was responsible for executing contracts as part of its daily operational role, foundation management contractors were responsible for dealing with vendors and subcontractors delivering on those contracts. Two specific consequences emerged from this dynamic:

- According to project staff we interviewed and surveyed, foundation managers relied more on direction from consultants and vendors than on the advice of technical staff. When project staff raised concerns about the sufficiency of support from *eSIS* (the student information management software) vendors, managers applied inadequate controls to ensure deficiencies were remedied or contract deliverables were completed. This shortcoming may, in turn, have affected the viability of the data warehouse, which was constructed on the framework of *eSIS* data elements. Department staff and vendors agreed that *eSIS* had not addressed state and federal reporting formats required by the department.



This complication may have been prevented had state and local needs been clearly defined before selecting vendors and clear state contract oversight authority established.

- The department paid \$1 million to the data warehouse vendor in November and December 2004 before a product was delivered. Department staff and the vendor agreed that the product, which was delivered to the department in 2005, did not meet the original design specifications. The state can ensure future technology investments are profitable and strategically anchored to actual needs through stronger contract oversight.<sup>21</sup> This oversight can help bridge the gap between promises made by the vendor and the actual capabilities of technology. In addition, by openly addressing the motives and missions of each party, the state can facilitate both satisfactory delivery of agreed upon products and maintain trust within a partnership.<sup>22</sup>

### **Current Direction**

Current initiatives to improve the management of student information lack clarity on the respective roles of the department, the board, and school districts. As previously mentioned, the department has limited district involvement in new initiatives. Department and board staff we spoke with differed on the degree to which the board should be involved in the department's new projects.<sup>23</sup> In 2005, staff of both the board and the department *separately* submitted applications for the *same* federal grant for "longitudinal" data systems. This duplication resulted in wasted efforts for both offices. The department's grant application was not even considered by the US Department of Education; the board's proposal was considered but not approved.

Within the department, roles are also not clearly defined. Department staff had differing opinions about how each bureau would contribute to the development of a statewide data dictionary. In addition, many department bureaus maintain separate data collections that are not often shared or understood outside each bureau. Department staff acknowledged that resolving ownership of and responsibility for data collections is a key aspect of the department's efforts to improve its student information management. The board and the department should resolve these issues at the state level before implementing new technology projects in schools and districts.

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<sup>21</sup> Government Accountability Office, *Government Reform: Legislation Would Strengthen Federal Management of Information and Technology*, GAO Testimony (July 1995), 12–13.

<sup>22</sup> Mike Cross, "Why government IT projects go wrong," *Computing* (September 11, 2002).

<sup>23</sup> In addition, members of the Idaho Council for Technology in Learning are in the process of developing a separate plan for a statewide K–20 student information system.

## Summary

A 2003 report by the British Parliamentary Office of Science and Technology identified the “lack of effective engagement with stakeholders” as one of the common causes of failure in government information technology projects.<sup>24</sup> Although school and district staff may recognize the value of new initiatives, sufficient trust between the state and local agencies must be in place to ensure initiatives are successful. Clear and consistent engagement should include regular distribution of project information, timely updates about changes to the project, and a mechanism for end users to contact project management when issues arise.<sup>25</sup> Clearly defined roles and responsibilities, close attention to the requirements, capacities, and cooperation of school districts are key to realistic and well-grounded future projects.

Idaho Code gives the Superintendent of Public Instruction responsibility to determine uniform reporting formats for school district financial, statistical, and performance data.<sup>26</sup>

In 2006, the Legislature empowered the Board of Education to adopt rules for “a student information management system.”<sup>27</sup>

These distinct but related responsibilities highlight the importance of cooperation and communication between the board and the department.

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<sup>24</sup> United Kingdom, Parliamentary Office of Science and Technology, *Government IT Projects* (July 2003), 8.

<sup>25</sup> IT Governance Institute, *Board Briefing on IT Governance, 2nd Edition* (2003), 11, 36.

<sup>26</sup> IDAHO CODE § 33-120.

<sup>27</sup> Idaho Code does not provide a definition for “student information management system.” IDAHO CODE § 33-120, cf § 67-1509; H. 752, 58th Leg., 2<sup>nd</sup> Sess. (Idaho 2006), § 1.

## Chapter 5

# ISIMS Lessons: Planning and Implementation

*School and district staff responding to our survey supported the long-term vision of the Idaho Student Information Management System (ISIMS) project; however, they raised concerns about its scope and planning efforts. Because the ISIMS project was not designed in manageable stages, system components were not thoroughly tested, and training was misdirected. The ISIMS project was based on unproven technologies, and vendors were chosen without a clear understanding of the requirements and resources of Idaho school districts. The scope of the department's present efforts aligns with best practice, but these efforts lack a unified and updated plan.*

Proper planning and realistic expectations are overarching concepts of information technology best practice. These concepts are relevant to both the lessons of the Idaho Student Information Management System (ISIMS) project and to future efforts by the Board of Education and the Department of Education to improve the collection and maintenance of student information in Idaho. Exhibit 5.1 outlines survey responses from school, district, and former ISIMS staff on planning and implementation of ISIMS.

Survey respondents in ISIMS-participating schools and districts were more likely to have positive opinions about the expertise of both ISIMS managers *and* ISIMS staff. These survey responses may indicate that school and district staff were able to separate their frustrations with the project from their opinions about the people who were managing it. A majority (57 percent) of school and district staff who participated in ISIMS and responded to our survey had positive opinions about ISIMS' long-term vision. Conversely, almost half (46 percent) of respondents from non-participating schools or districts had negative views about the project's vision.

### The State Should Have a Realistic Plan

A number of factors can complicate technology projects, according to literature on government information technology. Attempting to implement all the components of a system at once—such as student information *alongside* curriculum management software—may decrease the chances of success for the entire project. According to Idaho Legislative Audits, “on average, projects

### Exhibit 5.1: Survey Responses on the Quality of State-Level ISIMS Planning and Implementation

	Former ISIMS Staff	School and District Staff
Proper planning with clear vision and objectives <sup>a</sup>	—	—
Realistic expectations (time, resources, technological capabilities) <sup>b</sup>	—	—
Manageable milestones and measurable deliverables <sup>c</sup>	—	—
Realistic scope <sup>d</sup>	—	—
Competent staff <sup>e</sup>	+	+
Experienced project management <sup>f</sup>	—	=
Adequate contract negotiation and competition <sup>g</sup>	=	—

Notes: + indicates more respondents were positive than negative

— indicates more respondents were negative than positive

= indicates respondents were equally divided

<sup>a</sup> “Formation of a long-term vision” and “Methods of achieving ISIMS objectives” in our school/district survey.

<sup>b</sup> “The speed of ISIMS implementation” in our school/district survey.

<sup>c</sup> “Accomplishment of ISIMS project milestones” in our school/district survey.

<sup>d</sup> “Size/complexity of ISIMS design” in our school/district survey.

<sup>e</sup> “Expertise of ISIMS project staff” in our school/district survey.

<sup>f</sup> “Expertise of ISIMS project managers” in our school/district survey.

<sup>g</sup> “Process used to select ISIMS vendors/software” in our school/district survey.

Source: Office of Performance Evaluations’ surveys of former ISIMS management, staff, contactors, and vendors; public school and district staff (superintendents, principals, administrators, and technology coordinators), May 2006.

with smaller project milestones were less likely to fail or to be racked with major problems.”<sup>1</sup>

### Reasonable Scope

Both former ISIMS project staff and school and district survey respondents, regardless of whether they had participated in the project, rated the size and complexity of the ISIMS project poorly.<sup>2</sup>

<sup>1</sup> Idaho Legislative Services Office, Legislative Audits, *Key Features to Avoiding the Risk of IT System Challenges and Failures in the State of Idaho* (2002); United Kingdom, Parliamentary Office of Science and Technology, *Government IT Projects* (July 2003), 4; Organization for Economic Co-operation and Development, *The Hidden Threat to E-Government: Avoiding Large Government IT Failures*, Public Management Policy Brief (March 2001), 2.

<sup>2</sup> Survey respondents who had not yet implemented ISIMS were more likely to indicate negative views.

As described in chapter 2, ISIMS evolved in several stages, ultimately becoming a five-part system that relied on three primary vendors to simultaneously provide tools for student information and curriculum management, reporting, analysis, and data storage. These objectives reflected the project's broad vision to improve access to education data for a wide range of stakeholders. As ISIMS added vendors in order to meet these expectations, the complexity of the project scope increased. The following are examples of views expressed by some school and district staff and former ISIMS staff:

ISIMS had a grand vision... The scope was huge and instead of building on success—one brick at a time—a “big bang” approach was taken which greatly added to the initial costs and risks.

ISIMS tried to deploy too many new technologies together... Staging the products over a longer period would have been more manageable.

Only slightly more than 17 percent of school and district respondents had positive opinions of ISIMS' methods to achieve its objectives. While the largest single group of school and district survey respondents indicated the speed of ISIMS implementation was too fast, the variation in responses suggests that many schools and districts had very different needs in regard to the speed of implementing new technologies.

**School and district staff survey responses about the speed of ISIMS implementation**

	<u>Percent of Respondents</u>
Too fast	23.8%
Fast, but acceptable	20.1
Just right	20.6
Slow, but acceptable	16.9
Too slow	18.5

Many school and district staff and former project staff expressed concern that unrealistic timeframes to achieve objectives had jeopardized the ISIMS project. Implementation milestones were still in draft form in July 2004. At that time, the project was gearing up to simultaneously launch two-thirds of ISIMS features (257 features of 10 distinct function and supporting components, including student information and curriculum management) during the first phase of implementation. However, as discussed in chapter 2, only the student information management software was used in districts participating in the first phase of implementation in August 2004.

School and district staff and former ISIMS staff shared negative opinions about how well ISIMS accomplished its milestones. Although school and district survey respondents who had *not* participated in ISIMS were more likely to indicate negative opinions, slightly more than 18 percent of ISIMS participants indicated any positive response. This response suggests that while some of those who had participated in ISIMS may have seen some progress, this progress was not necessarily obvious to others or to most respondents in participating schools and districts.

## ***Responsive Planning***

According to the IT Governance Institute, successful information technology “strategic planning is a documented, living process” and “realistic long-range IT plans are developed and constantly updated” to mirror developments in technology and changes to the business needs of users.<sup>3</sup> This kind of responsive planning can help ensure project success.

Some former staff of the ISIMS project indicated that proper planning should have been ongoing, as indicated in the following remarks:

After the initial Pearson initiative was halted, no schedule/fiscal re-planning was done.

ISIMS failed because we were unwilling to change the scope or timeline of the project... We need to understand that major projects like these cannot be accomplished without an effective process to revise the project as we learn from the implementation.

Best practice literature describes similar experiences in government information technology projects where managers resist changing the course of a project because they anticipate those changes will cause a loss of executive support.<sup>4</sup> This lack of responsive planning can result in wasted efforts and resources. ISIMS project management, contractors, and department and district staff confirmed that structural changes to ISIMS were not reflected in changes to the timelines or budget for implementation. ISIMS managers told us they feared that making changes to the plan would jeopardize executive and stakeholder support and legislative funding.

As a result, piloting and the first phase of implementation in 29 school districts and one charter school went forward in spring 2004, although ISIMS project staff were aware of performance, security, and budget concerns. This schedule created the following additional problems.

***System components were not thoroughly tested.*** Not all system elements were thoroughly tested before being installed in Idaho schools and districts. Several district staff and former ISIMS project staff agreed that ISIMS should not have moved out of its piloting phase until the system had proven functional:

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<sup>3</sup> IT Governance Institute, *CobiT 4.0* (2005), 32.

<sup>4</sup> Northern Ireland Audit Office, Report by the Comptroller and Auditor General, *Civil Service Human Resource Management System: Cancellation of the Payroll Project* (November 2004), 12; F. Warren McFarlan, “Portfolio Approach to Information Systems,” *Harvard Business Review* 59:5 (September/October 1981), 142–150.

This type of project must be set in stages and time increments to develop, test, redesign, test, then test on a few more districts, not try to whole hog the project...

Because ISIMS components were not thoroughly tested before implementation, as a district respondent to our survey noted, “countless hours were spent in the district on a program that did not work, did not work well, or provided meaningless information.”

***Training was misdirected.*** Because system components were being modified as they were being used, trainers and local staff were exposed to new material on an ongoing basis, limiting their ability to effectively learn and use the software and teach others to do the same. As a result, efforts to train district staff were misdirected. Training often related to functions of the system—such as the Orion “gradebook”—to which districts had not yet converted, while current and relevant training on the operational student information software, *eSIS*, was often unavailable.

***The effects of system change were not understood.*** A successful project requires the effective communication of any changes to the plan. Stakeholders, including legislators, were informed that ISIMS had evolved from a two-part to a five-part system. However, management did not fully grasp (or address through planning) the magnitude of this change. As a result, the repercussions of this change were not effectively communicated to legislators and the public.

All levels of management within the ISIMS project, other state entities, and the public should have had opportunities to scrutinize the ISIMS project plan. This scrutiny may have dispelled or clarified miscommunication about the goals of the project and promoted better project planning. Open communication among the board, the department, other state entities, and district professionals may safeguard the viability of future initiatives.<sup>5</sup>

### ***Current Direction***

The Department of Education’s current efforts to implement a unique student identifier and a data dictionary in manageable stages towards future improvements are aligned with best practice. However, as of July 2006, department staff had not developed a unified plan for the department’s objectives and had developed only rough or outdated timeframes for completion of these efforts.

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<sup>5</sup> Deepak Sarup, “‘To Be, or Not To Be’: The Question of Runaway Projects,” *Information Systems Control Journal* Vol. 5 (2003).

## The State Should Have Realistic Expectations of Technology

The rapid pace of technology development makes it difficult for agencies to gauge whether commercially-available “solutions” meet their needs, or if riskier, “cutting-edge solutions” will better meet their needs.<sup>6</sup> The Office of Management and Budget requires federal agencies to purchase commercial software unless the cost-effectiveness of custom development can be clearly documented.<sup>7</sup> According to Idaho State Tax Commission staff, the commission’s CATS (Convert All Tax Systems) project successfully used commercial software at roughly half the cost of a custom system.

### ***Proven Technology Solutions***

To gauge whether school and district staff felt ISIMS software had been properly selected, we asked survey respondents whether they thought the project had appropriately considered software already in use by schools and districts. Forty-five percent of respondents in participating districts expressed negative views on this point. Respondents who had not participated in ISIMS were even less likely to believe that established software packages in Idaho were considered during ISIMS development.

When asked to rate the quality of the process used to select ISIMS software, over 58 percent of all school and district staff responding to our survey rated it poorly.<sup>8</sup> Less than 12 percent of district staff gave the selection process a positive rating. In contrast, former ISIMS staff, vendors, and managers who responded to our survey were evenly divided about the adequacy of contract negotiation and competition.

By May 2003, foundation consultants had concluded that Pearson Education Technologies software would not meet the goals of ISIMS. These consultants predicted specific difficulties integrating the student information management component with a curriculum management piece. Despite this early warning of the limits of technology development, two different software vendors and products (*eSIS* and *Orion*) were then selected to replace the Pearson products for student information and curriculum management, respectively.<sup>9</sup> Although the

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<sup>6</sup> United Kingdom, Parliamentary Office of Science and Technology, *Government IT Projects Report 200* (July 2003), 4; Organization for Economic Co-operation and Development, *The Hidden Threat to E-Government: Avoiding Large Government IT Failures*, Public Management Policy Brief (March 2001), 3.

<sup>7</sup> Executive Office of the President of the United States, Office of Management and Budget, *OMB Circular A-130* (Revised), Transmittal Memorandum No. 4.

<sup>8</sup> On this question, our analysis showed no statistically significant difference between the responses of staff in ISIMS participating and ISIMS non-participating districts.

<sup>9</sup> A third vendor, CRI Advantage, was later selected to provide its *Academic Accelerator* software for the reporting and analysis component.



new software selection committee represented a broad range of stakeholders, and evaluation criteria were comprehensive, former ISIMS staff we interviewed expressed concerns that the selection process was rushed.

Moving the project forward with new vendors allowed the project to remain consistent with a statewide, centralized vision. However, ISIMS expanded beyond the current, proven capacities of the educational technology industry. As a result, the following two practical lessons emerged.

***Centralized systems depend on stable wide area networks.*** Because centralized systems rely on stable and dedicated network connections, projects based on centralized models must have a clear statement of system requirements. Before and during ISIMS' vendor selection process in July 2003, vendors were unable to clearly specify how their software would perform under different connectivity (bandwidth) conditions. Vendors' inability to provide accurate guidance on the bandwidth required to run their applications in turn limited the ability of the state and districts to address adequate bandwidth. Vendors were selected before district and network requirements were known (ISIMS management did not examine conditions of local and state networks until spring 2004).

***Diversified software must have a framework to operate in tandem.*** Multiple software packages rely on a common framework to function as components of a single, centralized system. The framework, called School Interoperability Framework (SIF), was not a fully developed technology and had already been highlighted by foundation contractors as a barrier to implementation of Pearson software for ISIMS in 2001–2002. As ISIMS added vendors, project staff were required to continue developing software to ensure packages could operate together. This approach increases the risk of project failure.<sup>10</sup> The department outlined similar risks in its original 2001 ISIMS proposal to the foundation:

Student data and curriculum management systems are best built upon existing structures. Building completely new systems from the ground up is very expensive and can be problematic, forcing delays and extra expenses for successful completion.<sup>11</sup>

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<sup>10</sup> Northern Ireland Audit Office, Report by the Comptroller and Auditor General, *Civil Service Human Resource Management System: Cancellation of the Payroll Project* (November 2004), 11.

<sup>11</sup> State Superintendent of Public Instruction, Department of Education, "Idaho Schools Information Management System: Proposal for Funding to the JA and Kathryn Albertson Foundation" (October 2001), 8.

A former ISIMS staff who responded to our survey summarized this lesson:

The project lacked a common, tested software framework. None of the vendors selected had been used in schools in Idaho or together before... Ensuring products worked as advertised, creating new procedures to work within them, and lack of integration caused a considerable amount of work.

By establishing clear project goals and realistic expectations, project managers can better judge whether vendors' solutions fit the actual needs of educators and can choose proven products that will not necessitate ongoing modification.<sup>12</sup>

### ***Current Direction***

As mentioned in chapter 3, department technology and management staff we spoke with did not agree on the best approach for selecting software for the department's current initiative to develop a unique student identifier. Department management favored the current arrangement with an established department contractor to write Idaho-specific software; technology staff recommended purchasing a developed and tested mainstream package.

The department would benefit from a realistic expectation of the technology services that a packaged software program will provide. The department cannot prevent a vendor from "overselling" its products, but can take steps to ensure it invests its scarce resources in proven technologies, as presented in the following recommendation.

### **Recommendation**

As the state moves forward with improvements to its system of collecting and reporting student information, the Board of Education and the Department of Education should model cooperation and effective planning at the state level. Cooperation and effective planning would include developing a realistic plan that responds to the unique needs and capabilities of schools and districts. State planning efforts should also utilize proven technology solutions and clearly define the roles and responsibilities of all stakeholders.

The checklist provided in exhibit 5.2 may serve as a guide to future large scale information technology efforts. By addressing the lessons of the ISIMS project when implementing new initiatives, agencies and lawmakers can ensure a greater degree of confidence and success.

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<sup>12</sup> Virginia Joint Legislative Audit and Review Commission, *Review of Information Technology Systems Development* (February 2003), ii.

## Exhibit 5.2: Best Practices Checklist for Information Technology Projects

### Clearly Defined Roles and Responsibilities

- ☐ Are stakeholders clearly identified?
- ☐ Are the roles and responsibilities of all parties clearly defined?
- ☐ Does executive management have sufficient expertise and authority for contract oversight and budget control?

### User Involvement

- ☐ Have the needs of end users been identified and incorporated into the project objectives?
- ☐ Have *existing* resources (infrastructure, time, staff, funding) been identified and incorporated into the project development plan?
- ☐ Does the project have a clear method for two-way communication between end users with technical expertise and project management and executive leadership?

### Realistic Expectations of Technology

- ☐ Have vendors provided a clear statement of requirements that addresses end user needs and project objectives?
- ☐ Are the components of the project based on established or proven technologies?

### Proper Planning

- ☐ Is the project divided into manageable stages of development and implementation?
- ☐ Is the project guided by a continually-updated project plan?
- ☐ Does the project have a clear method for regularly distributing updated planning documents to stakeholders?

Source: Office of Performance Evaluations.



## Appendix A

# School and District Staff Survey Responses

*The following tables provide results of our survey of superintendents, principals, and technology coordinators. Where responses showed statistically significant differences between staff who had and had not participated in ISIMS piloting or implementation, those responses have been reported separately. “Don’t know” and “not applicable” responses have been excluded from these figures.*

### Section I: Preparing for and Piloting ISIMS

	Participated in ISIMS?	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
As my school/district prepared for or piloted ISIMS, I had a clear understanding of what would be required of my school/district at each stage of ISIMS development.	Yes (n=116) No (n=134)	10.3% 3.0	40.5% 27.6	17.2% 20.9	24.1% 36.6	7.8% 11.9
As my school/district prepared for or piloted ISIMS, I received enough information about ISIMS to make technology-related decisions within my school/district.	Yes (n=118) No (n=133)	9.3 2.3	44.1 30.8	11.0 20.3	31.4 33.8	4.2 12.8
As my school/district prepared for or piloted ISIMS, I was informed about changes to ISIMS when I needed to know about them.	Yes (n=116) No (n=131)	6.0 3.1	36.2 25.2	21.6 27.5	28.4 32.1	7.8 12.2
As my school/district prepared for or piloted ISIMS, I was able to express my questions or concerns to:						
Implementation coordinators	Yes (n=90) No (n=86)	32.2 9.3	35.6 26.7	12.2 30.2	16.7 20.9	3.3 12.8
ISIMS “Help Desk”	Yes (n=81) No (n=66)	21.0 7.6	28.4 15.2	22.2 37.9	18.5 21.2	9.9 18.2
ISIMS management/ Albertson Foundation officials	All (n=172)	8.1	20.3	29.1	20.9	21.5
State education officials	All (n=189)	9.5	31.7	23.3	19.0	16.4
IT staff in my school district	All (n=188)	41	36.2	12.2	5.3	5.3
Others	All (n=33)	18.2	30.3	33.3	9.1	9.1
Overall, my questions or concerns were addressed by the ISIMS management team.	Yes (n=101) No (n=112)	8.9 3.6	33.7 19.6	22.8 29.5	25.7 30.4	8.9 17.0

Please rate how preparing for or piloting ISIMS affected the following aspects of your school/district:	Participated in ISIMS?		Very Positive Impact	Positive Impact	No Impact	Negative Impact	Very Negative Impact
	Yes	No					
Budget	Yes (n=93)	No (n=114)	4.3%	20.4%	33.3%	34.4%	7.5%
			7.0	7.0	28.9	42.1	14.9
Network capacity (bandwidth)	All (n=195)		9.7	23.1	35.9	21.0	10.3
Hardware/software capacity	All (n=199)		7.0	26.6	30.2	25.1	11.1
Ability to meet other IT needs	All (n=201)		5.0	20.4	28.9	37.3	8.5
Professional development	Yes (n=101)	No (n=112)	5.9	34.7	25.7	30.7	3.0
			4.5	14.3	46.4	28.6	6.3
Staff morale	All (n=218)		2.3	10.6	25.2	41.7	20.2
Staff awareness of technology issues	All (n=211)		4.3	27.0	41.7	19.9	7.1
Other	All (n=22)		9.1	9.1	45.5	27.3	9.1
Please rate the quality of the following aspects of state-level ISIMS planning and implementation efforts:	Participated in ISIMS?		Very Good	Good	Neither	Poor	Very Poor
	Yes	No					
Consideration of user (school/district) views	Yes (n=93)	No (n=109)	5.4%	29.0%	29.0%	23.7%	12.9%
			6.4	13.8	22.0	33.9	23.9
Consideration of school/district technological capacity (e.g., bandwidth, hardware)	Yes (n=95)	No (n=111)	11.6	27.4	17.9	28.4	14.7
			1.8	18.9	16.2	38.7	24.3
Consideration of software already in use by schools/districts	Yes (n=97)	No (n=109)	8.2	23.7	22.7	29.9	15.5
			4.6	8.3	22.9	39.4	24.8
Formation of a long-term vision	Yes (n=100)	No (n=114)	19.0	38.0	12.0	22.0	9.0
			5.3	24.6	24.6	25.4	20.2
Methods for achieving ISIMS objectives	All (n=204)		3.4	13.7	27.5	35.3	20.1
Size/Complexity of ISIMS design	Yes (n=96)	No (n=106)	3.1	15.6	17.7	39.6	24.0
			1.9	5.7	18.9	34.9	38.7
Accomplishment of ISIMS project milestones	Yes (n=93)	No (n=101)	2.2	16.1	21.5	37.6	22.6
			3.0	5.9	20.8	33.7	36.6
Expertise of ISIMS project managers	Yes (n=85)	No (n=94)	10.6	36.5	28.2	12.9	11.8
			4.3	18.1	36.2	25.5	16.0
Expertise of ISIMS project staff (e.g., coordinators)	Yes (n=89)	No (n=94)	18.0	34.8	28.1	13.5	5.6
			6.4	23.4	38.3	17.0	14.9
Process used to select ISIMS vendors/software	All (n=165)		3.6	7.9	30.3	21.8	36.4
Distribution of ISIMS progress reports	Yes (n=81)	No (n=99)	4.9	27.2	34.6	24.7	8.6
			5.1	9.1	30.3	33.3	22.2

## Section II: Idaho Student Information in the Future

		<u>Participated in ISIMS?</u>	<u>Too Fast</u>	<u>Fast, but acceptable</u>	<u>Just Right</u>	<u>Slow, but acceptable</u>	<u>Too Slow</u>
For my school/district, the speed of ISIMS implementation was	All	(n=189)	23.8%	20.1%	20.6%	16.9%	18.5%

To the best of your knowledge, which of the following approaches (defined in exhibit 4.2) best describes the State of Idaho's current vision or direction for student information management? (n=191)

	<u>Percent of Respondents</u>
Centralized (e.g., ISIMS)	21.5%
Regional	5.2
District Option A	11.0
District Option B	16.2
District Option C	30.4
Hybrid	5.2
Other	10.5

		<u>Participated in ISIMS?</u>	<u>Strongly Agree</u>	<u>Agree</u>	<u>Neither</u>	<u>Disagree</u>	<u>Strongly Disagree</u>
Idaho needs a statewide system for student information management.	Yes	(n=133)	43.6%	39.8%	7.5%	7.5%	1.5%
	No	(n=142)	31.7	33.8	16.2	11.3	7.0

## Section III: Your School/District Today

		<u>Participated in ISIMS?</u>	<u>Very Well</u>	<u>Well</u>	<u>Neither</u>	<u>Poorly</u>	<u>Very Poorly</u>
Please rate how well the following aspects of your school/district's current student information management system meet the needs of your school/district:							
Choice of software	All	(n=266)	29.3%	51.5%	14.3%	3.0%	1.9%
Hardware	All	(n=268)	30.2	55.2	11.9	2.2	0.4
Network capacity (e.g., bandwidth, servers)	All	(n=266)	33.5	50.0	11.7	3.8	1.1
Support from district administration	All	(n=273)	45.1	40.7	9.5	2.9	1.8
Professional development	All	(n=274)	19.3	44.9	23.0	10.2	2.6
Overall approach	Yes	(n=129)	26.4	53.5	15.5	4.7	0.0
	No	(n=145)	19.3	51.7	22.1	4.8	2.1
Other	All	(n=18)	33.3	16.7	16.7	11.1	22.2

		Participated in ISIMS?	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
In the immediate future, my school/district would benefit from:							
Improved ability to report to the Department of Education	Yes	(n=121)	30.6%	46.3%	18.2%	5.0%	0.0%
	No	(n=133)	28.6	33.8	27.8	6.0	3.8
Improved ability to share information (e.g., transcripts) with other schools/districts	All	(n=269)	33.8	41.6	15.2	7.8	1.5
A data dictionary (common data elements) used statewide	Yes	(n=125)	36.8	50.4	9.6	2.4	0.8
	No	(n=137)	33.6	36.5	20.4	7.3	2.2
A unique student identifier used statewide	Yes	(n=127)	41.7	40.9	11.8	5.5	0.0
	No	(n=140)	31.4	37.1	19.3	6.4	5.7
Improved connectivity (e.g., bandwidth)	All	(n=255)	40.0	31.4	19.6	5.1	3.9
A standards-based gradebook	Yes	(n=127)	33.1	39.4	20.5	4.7	2.4
	No	(n=143)	22.4	42.0	23.8	7.0	4.9
Improved ability to provide information to parents	All	(n=275)	36.7	38.9	12.4	8.7	3.3
Improved ability to analyze achievement results	All	(n=276)	41.3	41.3	11.2	4.3	1.8
Tools to manage curriculum	All	(n=272)	30.5	45.2	16.5	5.9	1.8
Other	All	(n=14)	57.1	21.4	14.3	7.1	0.0
I am confident in my school/district's ability to:							
Maintain all our network, hardware and software systems	All	(n=275)	41.8%	34.9%	8.7%	11.6%	2.9%
Train teachers to integrate software into the classroom	All	(n=275)	26.5	43.3	18.2	11.6	0.4
Educate students on network/hardware maintenance (if applicable)	All	(n=256)	23.8	35.5	24.6	12.9	3.1



## Appendix B

# Former ISIMS Project Staff Survey Responses

*The following tables provide results of our survey of former ISIMS project staff. This group included project staff (e.g., implementation coordinators), contractors (e.g., help desk personnel), vendors (e.g., software or services contractors), management (e.g., project manager), and state or foundation officials associated with the project. “Don’t know” and “not applicable” responses have been excluded from these figures.*

Please rate the quality of the following aspects of state-level ISIMS planning and implementation efforts:		<u>Very Good</u>	<u>Good</u>	<u>Neither</u>	<u>Poor</u>	<u>Very Poor</u>
Effective user input/involvement	(n=38)	10.5%	31.6%	26.3%	18.4%	13.2%
Executive management support	(n=40)	7.5	15.0	35.0	27.5	15.0
Clear statement of requirements and specifications (thorough needs assessment)	(n=36)	13.9	25.0	16.7	27.8	16.7
Proper planning (clear vision and objectives)	(n=39)	15.4	20.5	12.8	33.3	17.9
Realistic expectations (time, resources, technological capabilities)	(n=40)	0.0	10.0	7.5	47.5	35.0
Manageable milestones and measurable deliverables	(n=40)	0.0	7.5	45.0	42.5	5.0
Realistic scope	(n=40)	2.5	10.0	27.5	32.5	27.5
Competent staff	(n=38)	26.3	36.8	36.8	0.0	0.0
Experienced project management	(n=37)	8.1	13.5	29.7	29.7	18.9
Adequate contract negotiation and competition	(n=29)	6.9	31.0	24.1	31.0	6.9
Use of standard software	(n=38)	2.6	34.2	34.2	13.2	15.8
Risk identification and management	(n=34)	0.0	8.8	32.4	38.2	20.6



# Response to the Evaluation

*The response from the State Superintendent of Public Instruction refers to page numbers in an earlier draft of the report. Updated references are provided below:*

<i>Response Page Reference</i>	<i>See Report Page</i>
<i>7</i>	<i>20</i>
<i>19</i>	<i>20</i>
<i>34</i>	<i>34</i>
<i>48</i>	<i>46</i>
<i>50</i>	<i>48</i>
<i>52</i>	<i>50</i>
<i>60</i>	<i>58</i>





## STATE OF IDAHO

OFFICE OF  
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION

BOISE

August 18, 2006

DR. MARILYN HOWARD

(208) 332-6811  
FAX (208) 334-2228

Rakesh Mohan, Director  
Office of Performance Evaluations  
Idaho State Legislature  
700 W. State Street, Suite 10  
Boise, ID 83720-0055  
STATEHOUSE MAIL

### OPE REPORT: "ISIMS LESSONS LEARNED"

Dear Mr. Mohan:

Thank you for the opportunity to review the final draft of the ISIMS "Lessons Learned" report. I shared it with some of my key staff and am incorporating their thoughts in this response.

This is a useful document. Despite the passage of time since ISIMS was terminated, the decisions, frustrations, hopes, and disappointments of the project are still fresh in the memories of those of us who saw the infusion of private money as a way to quickly realize a complex dream – and then watched its collapse after so much effort had been expended. That disappointment will be magnified if we do not learn from it.

My thinking is colored by my own experience with technology. Since 1994, the Idaho Legislature has invested in technology for public schools. As a teacher and school administrator, I saw the power of this resource grow over the years. From a Franklin to an Apple II, from DOS to Windows, from green screens to color, each year schools have to decide what to buy to try to stay current. Sometimes students – often far more knowledgeable about computers than their teachers – were engaged to set up and repair machines. Districts installed wires within and between buildings, sometimes using volunteer labor. I know this because before I became Superintendent of Public Instruction, I was one of those local administrators doing those things.

I mention this to make the point that all around Idaho, teachers and administrators were doing the best they could, using the expertise and money at hand, to incorporate technology into the schools. We have not been unwilling. But we have often been stymied in our efforts to move ahead.

The report makes it clear that ISIMS highlighted the technical inadequacies of district networks, as well as the continuing need for a statewide telecommunications infrastructure that will support transmission of large amounts of data and will serve all state government agencies.

We knew much of that already, and the State Department of Education was willing to do its part to tackle the problem.

To repeat something I've said before, my initial proposal (in 2001) was to build a "Chevy" version of a student information management system. My requests then and in 2002 were neither endorsed by Governor Kempthorne nor approved by the Legislature. It was only when the Albertson Foundation offered financing to build what would become a "Cadillac" version that it seemed we would be able to proceed.

I don't want to sound defensive here. My point is simply that we knew there was a problem with information collection and this seemed a way to solve the problem. Your report does a good job of charting the course and eventual termination of the project and of identifying the major impediments to success.

I want to add some clarification to some of the points raised in the report:

- The report states that the SDE spent \$1.1 million in state and federal money on ISIMS (p. 19 and elsewhere). That is true. The SDE was on the brink of having to return nearly \$1 million to the U.S. Department of Education in federal funds allocated to Idaho for the purpose of developing a testing program required by the No Child Left Behind Act. The funds could also be used for data collection. Rather than send the money back, the SDE seized the opportunity to contribute to components of ISIMS that would be retained by the SDE and that would serve the department's long-range purpose of efficient data collection and analysis. The funds were spent before the project was finished because they had to be spent then or returned. (On p. 7, in the introduction, we cannot determine what "staff time" is included in this calculation of state and federal expenditures.)
- The report notes that a \$165,000 supplemental approved by the Legislature this year allowed the SDE to add two full-time positions in the technology area (p. 34). The funds in question are indirect cost revenues, rather than general funds, and the two positions represent a shift from contracted personnel to salaried personnel for purposes of efficiency and economy.
- The report refers to "unclear roles and responsibilities" between the state and the Albertson Foundation (p. 48). That may be true from a retrospective reading of contracts and agreements, but at the time it was clear that the Albertson Foundation was the driving force behind the expansion of ISIMS from the initial concept to the final version. One of

the “lessons learned” should be that a private-public partnership should, in fact, be a partnership of equals, not one dominated by the contributor of the most money.

- The observations about “private control over public interests” (p. 50 and elsewhere) are important. Several ISIMS staff members were “employed” by the SDE, but funded and directed through the foundation and its project managers. Eventually the overtime hours required of these employees were significant enough that I intervened. (Consequently, the SDE adopted personnel policies limiting the accrual of compensatory time.)
- The report describes the wasted effort and duplication when both the SDE and the State Board of Education applied to the U.S. Department of Education for grant funds to create a longitudinal data system (p. 52). Initially this did not appear to be duplication; initially the Office of the State Board of Education staff gave the SDE permission to proceed with writing and submitting a grant. Subsequently the OSBE decided that it wanted the grant, and so instructed the U.S. Department of Education not to accept the department’s proposal. In the end, the OSBE proposal was not approved, either.
- The report suggests that commercial software should be considered before a custom-designed system (p. 60). My question is: With what? The only significant support the SDE has received in its effort to develop a student information management system was from the Albertson Foundation. That is still true. Efforts to obtain financial support from the Legislature in 2005 were unsuccessful. The effort to obtain federal funding, described above, was unsuccessful. The two positions added in 2006 did not represent new state-funded positions, but rather permission to use indirect cost money.

A student information management system for Idaho public schools is still needed. Since the termination of ISIMS in December of 2004, the SDE, using the money and personnel we have at hand, has continued to work quietly toward a solution. Our success has been noted by the U.S. Department of Education, as noted in the attached letter received earlier this month regarding the SDE’s ability to collect and report special education data. Many of the comments made throughout the OPE report will be useful to us as we move ahead, even on a limited basis.

A major initiative that ends in the way ISIMS ended is not easy to get over. It takes time before “lessons learned” can be crafted without defensiveness or blaming. Frankly, I think enough time has passed already. Our biggest barrier to progress has been what seems to be a lack of confidence at all levels – legislative, agency, and school district – that we have the ability to create a system that satisfies our student information needs. We need to get over being mad or frightened and instead look ahead to how best to meet these needs.

Mr. Rakesh Mohan  
August 18, 2006  
Page 4

I thank you and your staff for investing time and effort into this history of ISIMS. You have identified a number of ways to improve our work in the future, and I believe we will all benefit from this study.

Sincerely,

A handwritten signature in cursive script that reads "Marilyn Howard".

Marilyn Howard  
State Superintendent of Public Instruction

Attachment:

August 8, 2006 letter from John Hager and Tom Luce, U.S. Department of Education

Copy: J. Jones, SDE  
R. Mincer, SDE  
S. Tiel, SDE



Mr. Rakesh Mohan  
August 18, 2006  
Attachment



UNITED STATES DEPARTMENT OF EDUCATION

WASHINGTON, D.C. 20202- \_\_\_\_\_

AUG \_ 8 2006

Dr. Marilyn Howard  
Superintendent of Public Instruction  
Idaho Department of Education  
Len B. Jordan Office Building  
650 West State Street  
P.O. Box 83720  
Boise, ID 83720-0027

Dear Dr. Howard:

Congratulations. This letter is to inform you that Idaho is excused from traditional reporting of IDEA data to U.S. Department of Education (ED) due to the high quality of your EDEN submission for SY 2005-06. Idaho has been qualified to supply the data for the Part B, Individuals with Disabilities Education Act Implementation of FAPE Requirements (Table 3) for SY 2006-07 (OMB #1820-0517) exclusively through the Education Data Exchange Network (EDEN). This is in addition to the previous approval for the exiting and child count collections in EDEN.

ED has been working for several years to build EDEN, to bring a new level of efficiency to our data collection efforts, and to reduce the burden felt by state offices in reporting information to ED. We have identified key data collections required under section 618 of the Individuals with Disabilities Education Act (IDEA) for qualified states to submit exclusively through EDEN. We are working to identify more IDEA collections that can become EDEN-only.

Thank you for your hard work to ensure that timely, high-quality data are supplied to ED via EDEN. Once again, congratulations.

Sincerely,

A handwritten signature in black ink that reads "John Hager".

John Hager  
Assistant Secretary  
Office of Special Education and  
Rehabilitative Services

A handwritten signature in blue ink that reads "Tom Luce".

Tom Luce  
Assistant Secretary  
Office of Planning, Evaluation  
and Policy Development

Cc: Dr. Mary Bostick, Director, Special Education  
Jean Taylor, IDEA Part B Data Manager  
John Romero, EDEN Coordinator

RECEIVED

AUG 18 2006

SUPERINTENDENT'S OFFICE  
STATE DEPT. OF EDUCATION



## Office of Performance Evaluations Reports Completed 2004–Present

Publication numbers ending with “F” are follow-up reports of previous evaluations. Publication numbers ending with three letters are federal mandate reviews—the letters indicate the legislative committee that requested the report.

<u>Pub. #</u>	<u>Report Title</u>	<u>Date Released</u>
04-01	Higher Education Residency Requirements	January 2004
04-02	Fiscal Accountability of Pupil Transportation	January 2004
04-03	School District Administration and Oversight	January 2004
04-01F	Management of State Agency Passenger Vehicles	January 2004
04-02F	Public Works Contractor Licensing Function	March 2004
04-03F	Timeliness and Funding of Air Quality Permitting Programs	June 2004
04-04F	Idaho Child Care Program	June 2004
04-05F	Idaho’s Medicaid Program	June 2004
04-04	Strategic Planning and Performance Measurement	December 2004
05-01	Public Education Technology Initiatives	January 2005
05-02	Child Welfare Caseload Management	February 2005
05-01HTD	Use of Social Security Numbers for Drivers’ Licenses, Permits and Identification Cards	February 2005
05-01F	Management of Correctional Data	March 2005
05-03	Idaho School for the Deaf and the Blind	October 2005
05-04	State Substance Abuse Treatment Efforts	December 2005
06-01	Management in the Department of Health and Welfare	February 2006
06-02	Idaho Student Information Management System (ISIMS)—Lessons for Future Technology Projects	August 2006
06-01F	Public Works Contractor Licensing Function	August 2006
06-02F	Idaho Child Care Program	August 2006
06-03F	Timeliness and Funding of Air Quality Permitting Programs	August 2006
06-04F	Fiscal Accountability of Pupil Transportation	August 2006
06-05F	School District Administration and Oversight	August 2006
06-06F	Public Education Technology Initiatives	August 2006
06-07F	Higher Education Residency Requirements	August 2006

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